SERVICE MANUAL

MODELS : LV3275/LV3295/LV3795(FD270PD/FD290PD/FC991PD)

P/NO : 3829RVP045R

JANUARY, 2004

LG Electronics Inc.

LG

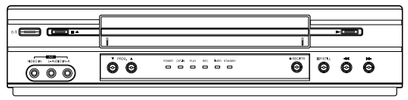
VIDEO CASSETTE RECORDER

SERVICE MANUAL

MODELS : MG24/MG64 (GD281S/GD981NS)

CAUTION

BEFORE SERVICING THE UNIT, READ THE “SAFETY PRECAUTIONS” IN THIS MANUAL.



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SECTION1 SUMMARY
KEY TO ABBREVIATIONS

A	AC	:Alternating Current
	ACC	:Automatic Color Control
	ACSS	:Automatic Channel Setting System
	ADJ	:Adjust
	A/E	:Audio Erase
	AFC	:Automatic Frequency Control
	AFT	:Automatic Fine Tuning
	AGC	:Automatic Gain Control
	A.H.SW	:Audio Head Switch
	ALC	:Automatic Level Control
	AM	:Amplitude Modulation
	AMP	:Amplifier
	ANT	:Antenna
	APC	:Automatic Phase Control
	ASS'Y	:Assembly
	AUX	:Auxiliary
B	B	:Base
	BGP	:Burst Gate Pulse
	BPF	:Bandpass Filter
	BS	:Brodcasting Satellite
	BW or B/W	:Black and White
C	C	:Capacitor, Chroma, Collector
	CAN	:Cancel
	CAP	:Capstan
	CAP.BRK	:Capstan Brake
	CAP.RVS	:Capstan Reverse
	CATV	:Cable Television
	CBA	:Circuit Board Assembly
	CCD	:Charge Coupled Device
	C.CTL	:Chro Control, Capstan Control
	CFG	:Capstan Frequency Generator
	CHROMA	:Chrominance
	CNR	:Chroma Noise Redution
	COMB	:Combination Comb Filter
	COMP	:Comparator Composite Compensation
	CONV	:Converter
	C.ROT SW	:Color Rotary Switch
	CS	:Chip Selcet
	C.SYNC	:Composite Synchronization
	CTL DIV	:Control Divide
	CUR	:Current
	CYL	:Cylinder
D	D	:Drum, Digital, Diode, Drain
	D.ADJ	:Drum Adjust
	DC	:Direct Current
	D.CTL	:Drum Control
	DEMOD	:Demodulator
	DET	:Detector
	DEV	:Deviation
	DHP	:Double High Pass
	DIGITRON	:Digital Display Tube
	DL	:Delay line
	DOC	:Drop Out Compensator
	DUB	:Dubbing
	D.V SYNC	:Dummy Vertical Synchronization
E	E	:Emitter
	EE	:Electric to Eletric
	EMPH	:Emphasis
	ENA	:Enable
	ENV	:Envelope
	EP	:Extended Play
	EQ	:Equalizer
	EXP	:Expander
F	F	:Fuse
	FB	:Feed Back
	FBC	:Feed Back Clamp
	FE	:Full Erase
	FG	:Frequency Generator
	FL	:Filter
	FM	:Frequency Modulation
	F/R	:Front/Rear
	FS	:Frequency Synthesizer
	FSC	:Subcarrier Frequency
	F/V	:Frequency Voltage
G	GEN	:Generator
H	H	:High, Horizontal
I	IC	:Integrated Circuit
	IF	:Intermediate Frequency
	INS	:Insert
L	L	:Low, Left, Coil
	LD	:LED
	LD VTG CTL	:Loading Voltage Control
	LECHA	:Letter Character
	L.M	:Level Meter
	LP	:Long Play
	LPF	:Low Pass Filter
M	MAX	:Maximum
	MD	:Modulator
	MECHA.CTL	:Mechanism Control
	MIC	:Microphone
	MIN	:Minimum
	MIX	:Mixer, Mixing
	M.M.	:Monostable, Multivibrator
	MMV	:Mono Multi Vibrator
	MOD	:Modulation, Modulator
	MODEM	:Modulator-Demodulator
	MPX	:Multiplex
N	NR	:Noise Reduction
O	OSC	:Oscillator
	OSD	:On Screen Display
P	PB	:Playback
	PCB	:Printed Circuit Board
	P.CTL	:Power Control
	PRE-AMP	:Preamplifier
	P.F	:Power Failure
	PG	:Pulse Generator
	PLL	:Phase Locked Loop
	PREM.DET	:Premire Detect
	P.P	:Peak-to-Peak
	PS	:Phase Shift
	PWM	:Pulse Width Modulation
	PWR CTL	:Power Control
Q	Q	:Transistor
	QH	:Quasi Horizontal
	QSR	:Quick Setting Record
	QTR	:Quick Timer Record
	QV	:Quasi Vertical
R	R	:Resistor, Right
	RE(or RC)	:Remocon, Receiver
	REC	:Recording
	REC S 'H'	:Record Start 'Hight'
	REF	:Reference
	REG	:Regulated, Regulator
	REMOCON	:Remote Control(unit)
	RF	:Radio Frequency
	R/P	:Record/Playback
	RTC	:Reel Time Counter
S	S	:Serial
	S.ACCEL	:Slow Accel
	SAOP	:Second Audio Program
	SC	:Scart, Simulcast
	S.DET	:Secam Detect
	SH	:Shift
	SHARP	:Sharpness
	SIF	:Sound Intermediate Frequency
	SLD	:Side Locking
	S/N	:Signal to Noise Ratio
	SP	:Standard Play
	ST	:Stereo
	SUB	:Subtract, Subcarrier
	SW or S/W	:Switch
	SYNC	:Synchronization
	SYSCON	:System Control
T	T	:Coil
	TP	:Test Point
	TR	:Transistor
	TRK	:Tracking
	TRANS	:Transformer
	TU	:Tuner, Take-up
U	UHF	:Ultra High Frequency
	UNREG	:Unregulated
V	V	:Volt, Vertical
	VA	:Always Voltage
	VCO	:Voltage Controlled Oscillator
	VGC	:Voltage Gain Control
	VHF	:Very High Frequency
	V.H.SW	:Video Head Switch
	VISS	:VHS Index Search
	VPS	:Video Program System
	VR	:Variable Resistor or Volume
	V-SYNC	:Vertical Synchronization
	VTG	:Voltage
	VV	:Voltage to Voltage
	VXO	:Voltage X-tal Oscillator
W	W	:Watt
	WHT	:White
	W/O	:With out
X	X-TAL	:Crystal
Y	Y/C	:Luminance/Chrominance
	YNR	:Luminance Noise Reduction
Z	ZD	:Zener Diode

PRODUCT SAFETY SERVICING GUIDELINES FOR VIDEO PRODUCTS

IMPORTANT SAFETY NOTICE

This manual was prepared for use only by properly trained audio-video service technicians.

When servicing this product, under no circumstances should the original design be modified or altered without permission from LG Electronics Corporation. All components should be replaced only with types identical to those in the original circuit and their physical location, wiring and lead dress must conform to original layout upon completion of repairs.

Special components are also used to prevent x-radiation, shock and fire hazard. These components are indicated by the letter "x" included in their component designators and are required to maintain safe performance. No deviations are allowed without prior approval by LG Electronics Corporation.

Circuit diagrams may occasionally differ from the actual circuit used. This way, implementation of the latest safety and performance improvement changes into the set is not delayed until the new service literature is printed.

CAUTION: Do not attempt to modify this product in any way. Never perform customized installations without manufacturer's approval. Unauthorized modifications will not only void the warranty, but may lead to property damage or user injury.

Service work should be performed only after you are thoroughly familiar with these safety checks and servicing guidelines.

GRAPHIC SYMBOLS

The exclamation point within an equilateral triangle is intended to alert the service personnel to important safety information in the service literature.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the service personnel to the presence of noninsulated "dangerous voltage" that may be of sufficient magnitude to constitute a risk of electric shock.

The pictorial representation of a fuse and its rating within an equilateral triangle is intended to convey to the service personnel the following fuse replacement caution notice:

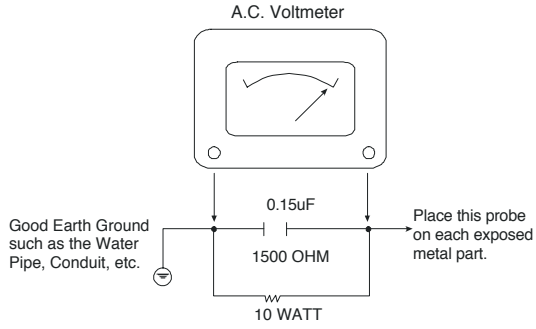
CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ALL FUSES WITH THE SAME TYPE AND RATING AS MARKED NEAR EACH FUSE.

SERVICE INFORMATION

While servicing, use an isolation transformer for protection from AC line shock. After the original service problem has been corrected, make a check of the following:

FIRE AND SHOCK HAZARD

1. Be sure that all components are positioned to avoid a possibility of adjacent component shorts. This is especially important on items trans-ported to and from the repair shop.
2. Verify that all protective devices such as insulators, barriers, covers, shields, strain reliefs, power supply cords, and other hardware have been reinstalled per the original design. Be sure that the safety purpose of the polarized line plug has not been defeated.
3. Soldering must be inspected to discover possible cold solder joints, solder splashes, or sharp solder points. Be certain to remove all loose foreign particles.
4. Check for physical evidence of damage or deterioration to parts and components, for frayed leads or damaged insulation (including the AC cord), and replace if necessary.
5. No lead or component should touch a high current device or a resistor rated at 1 watt or more. Lead tension around protruding metal surfaces must be avoided.
6. After reassembly of the set, always perform an AC leakage test on all exposed metallic parts of the cabinet (the channel selector knobs, antenna terminals, handle and screws) to be sure that set is safe to operate without danger of electrical shock. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST. Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner: Connect a 1500 ohm, 10 watt resistor, paralleled by a .15 mfd 150V AC type capacitor between a known good earth ground water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and .15 mfd capacitor. Reverse the AC plug by using a non-polarized adaptor and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.75 volts RMS. This corresponds to 0.5 milliamp AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



TIPS ON PROPER INSTALLATION

1. Never install any receiver in a closed-in recess, cubbyhole, or closely fitting shelf space over, or close to, a heat duct, or in the path of heated air flow.
2. Avoid conditions of high humidity such as: outdoor patio installations where dew is a factor, near steam radiators where steam leakage is a factor, etc.
3. Avoid placement where draperies may obstruct venting. The customer should also avoid the use of decorative scarves or other coverings that might obstruct ventilation.
4. Wall- and shelf-mounted installations using a commercial mounting kit must follow the factory-approved mounting instructions. A product mounted to a shelf or platform must retain its original feet (or the equivalent thickness in spacers) to provide adequate air flow across the bottom. Bolts or screws used for fasteners must not touch any parts or wiring. Perform leakage tests on customized installations.
5. Caution customers against mounting a product on a sloping shelf or in a tilted position, unless the receiver is properly secured.
6. A product on a roll-about cart should be stable in its mounting to the cart. Caution the customer on the hazards of trying to roll a cart with small casters across thresholds or deep pile carpets.
7. Caution customers against using extension cords. Explain that a forest of extensions, sprouting from a single outlet, can lead to disastrous consequences to home and family.

SERVICING PRECAUTIONS

CAUTION : Before servicing the VCR covered by this service data and its supplements and ADDENDUMS, read and follow the SAFETY PRECAUTIONS. NOTE : if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publications, always follow the safety precautions.
Remember Safety First:

General Servicing Precautions

1. Always unplug the VCR AC power cord from the AC power source before:
   (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
   (2) Disconnection or reconnecting any internal electrical plug or other electrical connection.
   (3) Connecting a test substitute in parallel with an electrolytic capacitor.
   Caution : A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemicals on or near this VCR or any of its assemblies.

3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cotton-tipped swab, or comparable soft applicator.
   Unless specified otherwise in this service data, lubrication of contacts is not required.

4. Do not defeat any plug/socket B+ voltage interlocks with whitch instruments covered by this service manual might be equipped.

5. Do not apply AC power to this VCR and/or any of its electrical assemblies unless all solid-state device heat sinks are cerrectly installed.

6. Always connect test instrument ground lead to the appropriate ground before connection the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter(500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1M-ohm.

Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor chip components.
The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a GROUNDED-tip soldering iron to solder or unsolder ES devices.

4. Use only an anti-static solder removal device. Some solder removal devices not classified a “anti-static” can generate electrical charges sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protec tive package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Normally harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

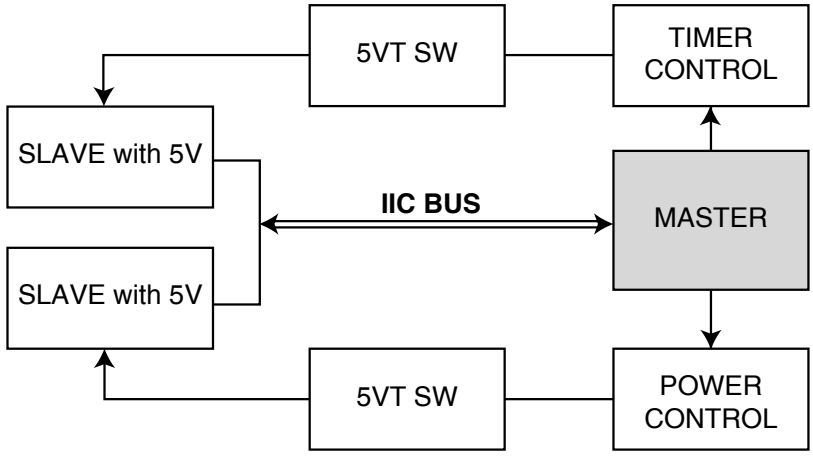
PROPOSAL FOR APPLYING SHORT PROTECTION

• The Contents of Examination

As all the IC that is applied to VCR is controlled by IIC, mutual communication, if Vcc of IC is short or open with detecting 'Acknowledge' data of the specific IC according to each power(5V, 5VT) μ-COM gets unable to detect 'ACK' data.

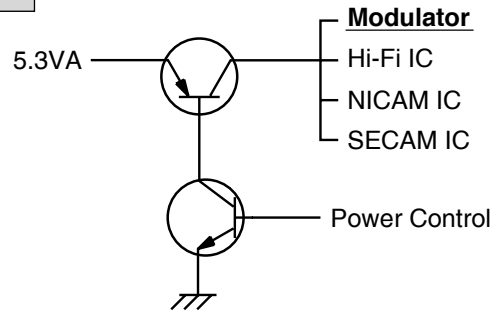
μ-COM regards this case as abnormal one and if it can't detect 'ACK' data for a certain time(3.5 sec) the signal of 'Power Control' and 'Timer Control' are switched to 'Low'. As a result POWER Switching TR is kept from generating heat and fire.

Conception BLOCK Diagram

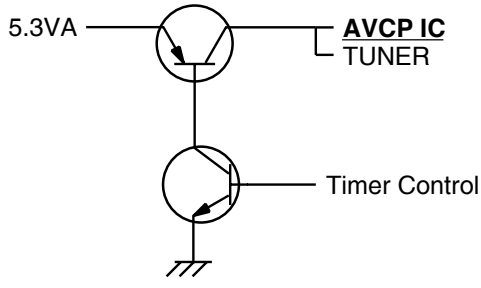


• POWER for each IC

5.2V



5.2VT



• IC to detect 'ACK' data is selected as below because IC is different in accordance to region and option

S/	5V POWER	SECAM IC
Series	5VT POWER	AVCP IC
P/Y/I	5V POWER	Modulator
Series	5VT POWER	AVCP IC

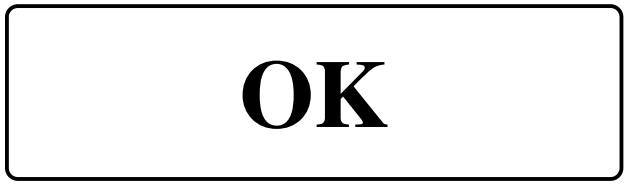
*Short protection off mode : DJ01 Diode in

SERVICE NOTICE ON REPLACING EEPROM

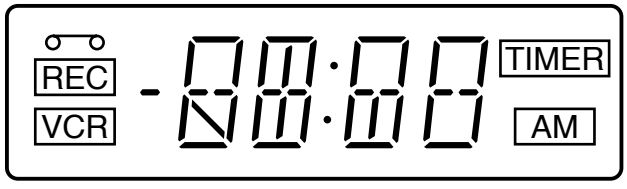
In case that defective EEPROM of PAL models is replaced, to operate these sets from the initial state MP KEY must be repaired as well before delivering to the customer.
If MP KEY isn't repaired the setting of RF OUT channel or LANGUAGE might be different from that for custormer's country.

•**MP KEY** : In case of PAL VCR if holding the REC button on the front panel and the CLEAR button on the remote control handset for 5 ~ 7 seconds with power being switch all and no tapes, OK is displayed at FLD for FLD models and LED becomes on for LED CLOCK models. This is the state that initializing EEPROM is finished.
(In case of PAL VCP if holding the REC button on the front panel and the MENU button on the remote control handset for 5 ~ 7 seconds with power being off and no tapes, All the LED DOTs become on. This is the state that initializing EEPROM is finished.)

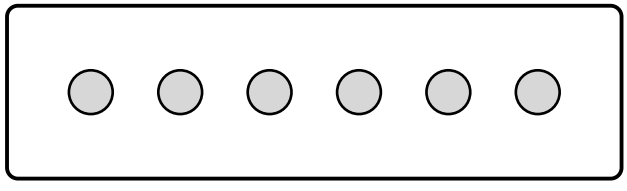
•**MP KEY's function** : MP KEY sets EEPROM's data up to the initial state.



• **FLD MODEL:**
MP KEY "OK"



• **LED CLOCK MODEL:**
MP KEY Switch all on a Light



• **LED DOT MODEL:**
MP KEY Switch all on a Light

SERVICE INFORMATION FOR EEPROM IC SETTING

EEPROM option code No. setting

NAME	HEX	BINARY
OPT1	00	00000000
OPT2	00	00000000
OPT3	00	00000000
OPT4	00	00000000
OPT5	00	00000000
OPT6	00	00000000

WR : OK I : EXIT MOVE : ◄ ►
EDIT : ▲▼

MASKROM : R00
EEPROM : R00 LG CODE

MODEL	NAME	HEX	BINARY
MG24	OPTION1	20	00000000
	OPTION2	F6	00000000
	OPTION3	70	00000000
	OPTION4	80	00000000
	OPTION5	DA	00000000
	OPTION6	00	00000000
MG64	OPTION1	36	00000000
	OPTION2	F6	00000000
	OPTION3	B0	00000000
	OPTION4	80	00000000
	OPTION5	DA	00000000
	OPTION6	00	00000000

WR : OK I : EXIT MOVE : ◄ ►
EDIT : ▲▼

EEPROM option code No. setting procedure

1. DETECT NEW EEPROM (OPTION EDIT SCREEN)
   - Eeprom EDIT screen automatically appears if replacing Eeprom.
   - Setup option data using the cursor Up/Down key of a remote control.
     (Setup upon BOM depending on OPT1~OPT6 model)
   - Since an initial remote control is set to LG for LG model, appropriately set optional data using the cursor Up/Down key.
2. EEPROM WRITED COMPLETE SCREEN
   - Writes data on EEPROM by using REMOCON "OK".
   - If completing the option data screen with a menu key, Powering Off is automatically done and the option edit screen is arranged.
3. PG ADJUST
   a) Insert the PAL SP Test Tape and play.
      Note - Adjust the distance of X, pressing the Tracking(+) or Tracking(-) when the “ATR” is blink after the PAL SP Test Tape is inserted.

   b) Press the Auto PG KEY on JIG Remocon(1’st) or Press “REC” key on set and “CLEAR” key on Remocon.(Then check the blink “TRK OK” on CLK/LED-TRK is a Initial)

   c) Press the Auto PG Key on JIG Remocon again (2’nd) or press “REC” key on set and “CLEAR” key on Remocon again.(Then check the blink “PG NG > PG OK” on CLK/LED.)

4. EEPROM INITIAL
   - SETUP is displayed in the field if pressing the FRONT REC KEY with the remocon number "CLEAR" key pressed in the status of powering Off.
   - AUTO SEARCH is done since the initial screen of ACMS is serviced if powering On.
   - Check basic operation (PLAY/RECORD...)

SPECIFICATIONS

General

Power	200-240V~, 50Hz
Power consumption	Approx. 12 Watts (Energy Saving mode: 3 Watts)
Video Head System	Double azimuth 4 heads, helical scanning (MG64) Rotary 2 heads, helical scanning (MG24)
Tape speed	23.39 mm/sec (SP mode) 11.69 mm/sec (LP mode)
Tape Format	Tape width 12.7mm (0.5 inch)
Max. recording time	4 hours (SP mode, E-240 Tape) 8 hours (LP mode, E-240 Tape)
Rewind time	Approx. 65 (±10) secs (E-180 tape)
Dimensions	360 x 82 x 230mm (W x H x D)
Weight	2.87 kg
Operating temperature	5º C - 35º C
Operating humidity	Less than 80%
Timer	24 hours display type

Video

Television system	CCIR standard (625 lines, 50 fields) PAL/SECAM colour signal
Recording format	PAL B/G, SECAM B/G, SECAM-L
Input level	VIDEO IN (SCART, RCA) 1.0 Vp-p, 75 Ohm unbalanced
Output level	VIDEO OUT (SCART) 1.0 Vp-p, 75 Ohm unbalanced
Signal to noise ratio	More than 43 dBm

Audio

Input level	AUDIO IN (SCART, RCA) SCART: - 6.0 dBm, more than 10 kohms RCA: - 6.0 dBm, more than 47 kohms
Output level	AUDIO OUT (SCART, RCA) SCART: - 6.0 dBm, less than 1 kohms RCA: - 6.0 dBm, less than 1 kohms
Track	Mono track & Hi - Fi Track
Frequency response	Normal : 100 Hz - 10 kHz (-6/+3 dBm) Hi - Fi : 20 Hz - 20 kHz (-3/+3 dBm)
Signal to noise ratio	Hi-Fi : More than 70 dB (JIS A filter)
Dynamic range	Hi-Fi : More than 85 dB (JIS A filter)

SECTION2 CABINET & MAIN FRAME

SERVICE METHOD

(1) Disassembly Flow

Top Case

Bottom Cover

Front Panel

Housing & Deck Assembly

Main C.B.A

LED C.B.A

(2) Re-assembly Flow for service like Fig. 2-1

LED C.B.A

Main C.B.A

Housing & Deck Assembly

(3) To check and replace Electrical parts

① Disassemble the unit according to No.1) Disassembly Flow.

② Re-assemble the unit according to No.2) Re-assembly Flow.

③ Place the unit like Fig. 2-1

④ Check and replace Electrical parts.

NOTE :

① Insert Video Cassette Tape inversely like Fig. 2-1 to check and replace defective parts.

② In disassembling and reassembling, be careful not to damaged CST switch.

(Positioned Upside Down)

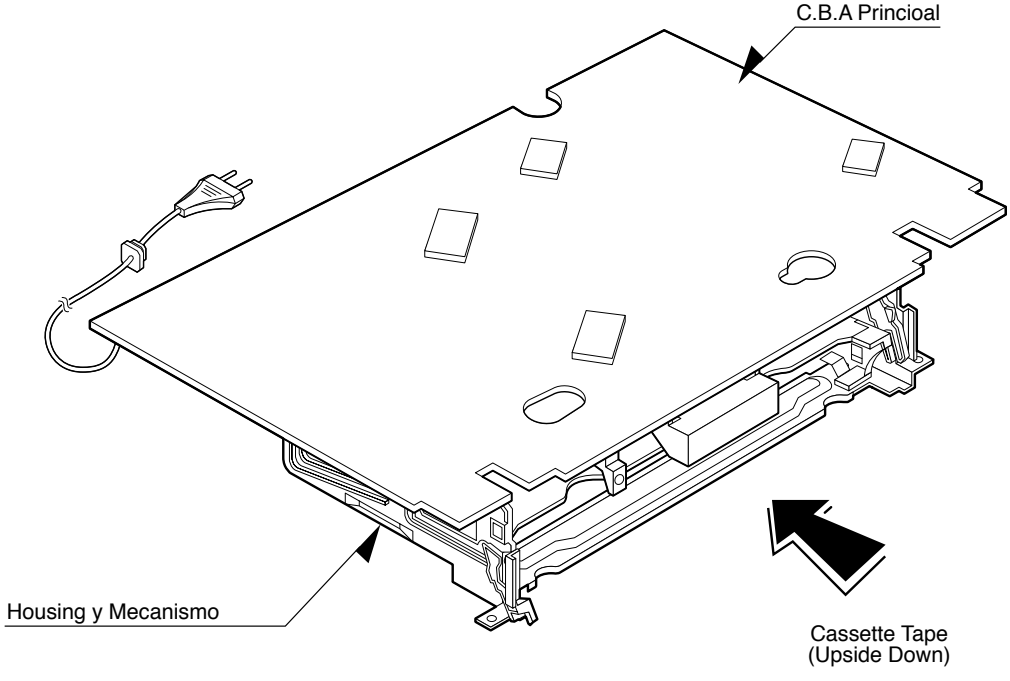
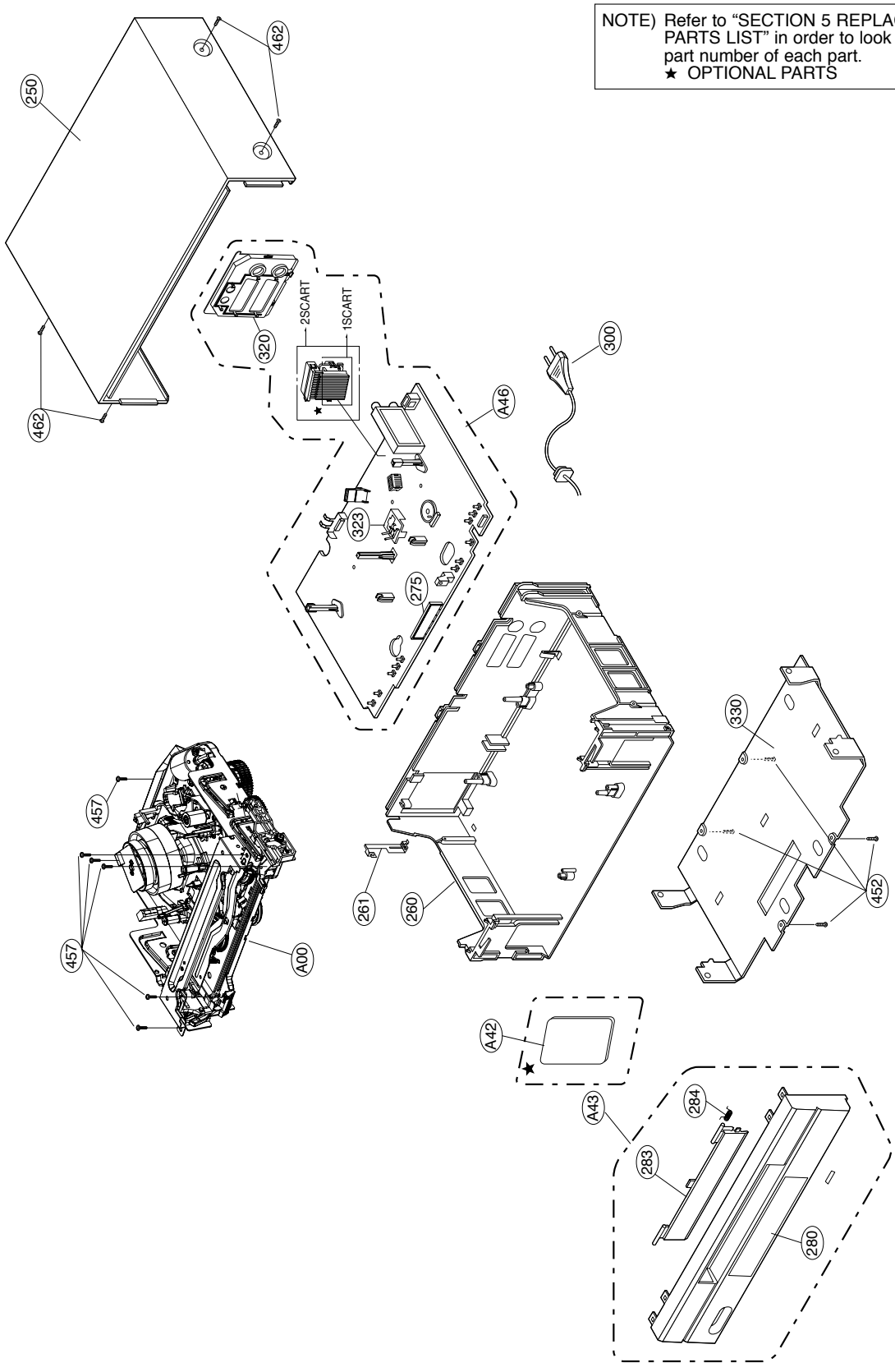


Fig.2-1

EXPLODED VIEWS

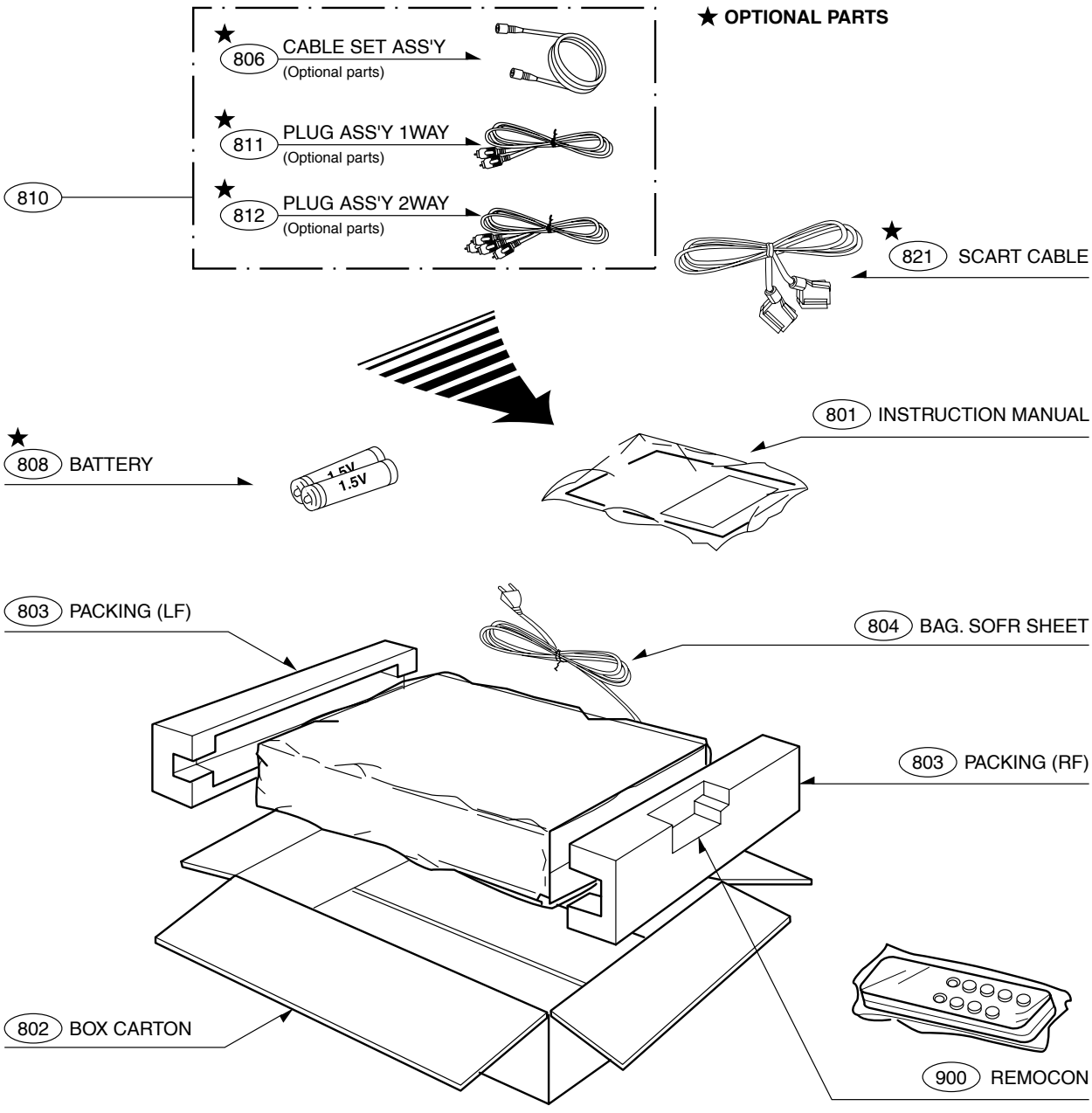
1. Cabinet and Main Frame Section

NOTE) Refer to “SECTION 5 REPLACEMENT PARTS LIST” in order to look for the part number of each part.
★ OPTIONAL PARTS



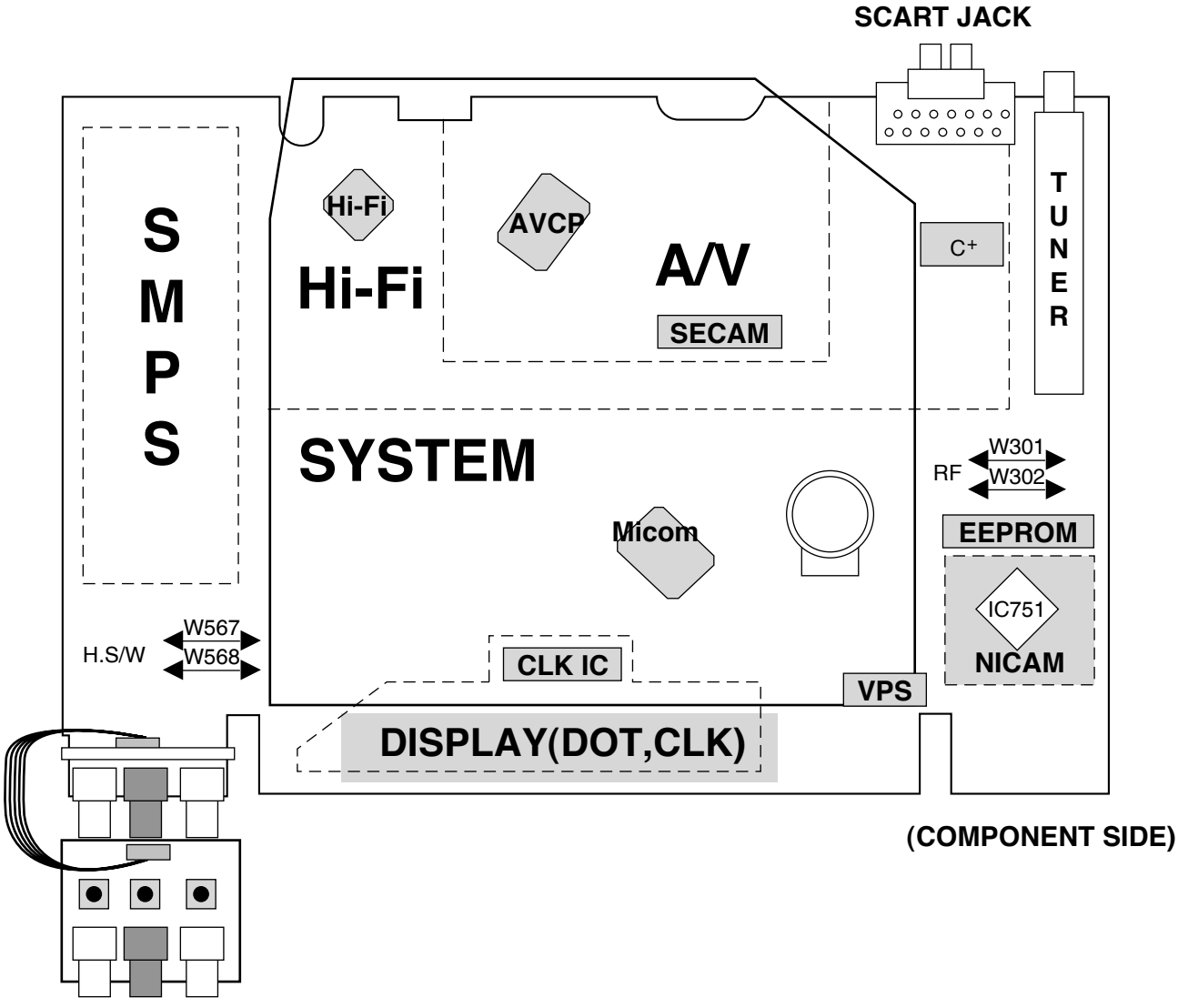
2. Packing Accessory Section

NOTE) Refer to “SECTION REPLACEMENT PARTS LIST in order to look for the part number of each part.



SECTION 3 ELECTRICAL
ELECTRICAL ADJUSTMENT POINTS ARRANGEMENT

: Measurement point
: Adjustment point



ELECTRICAL ADJUSTMENT PROCEDURES

1. Servo Adjustment

1) PG Adjustment

• Test Equipment

a) OSCILLOSCOPE
b) PAL TEST TAPE (VHS SP)
c) JIG REMOCON (AUTO PG SETTING)

• Adjustment And Specification

MODE	MEASUREMENT POINT	ADJUSTMENT POINT	SPECIFICATION
PLAY	V.Out H/SW(W567, W568)		6.5 ± 0.5H

• **Adjustment Procedure**

a) Insert the PAL SP Test Tape and play.
Note - Adjust the distance of X, pressing the Tracking(+) or Tracking(-) when the “ATR” is blink after the PAL SP Test Tape is inserted.

b) Press the Auto PG KEY on JIG Remocon(1’st) or Press “REC” key on set and “CLEAR” key on Remocon.(Then check the blink “TRK OK” on CLK/LED-TRK is a Initial)

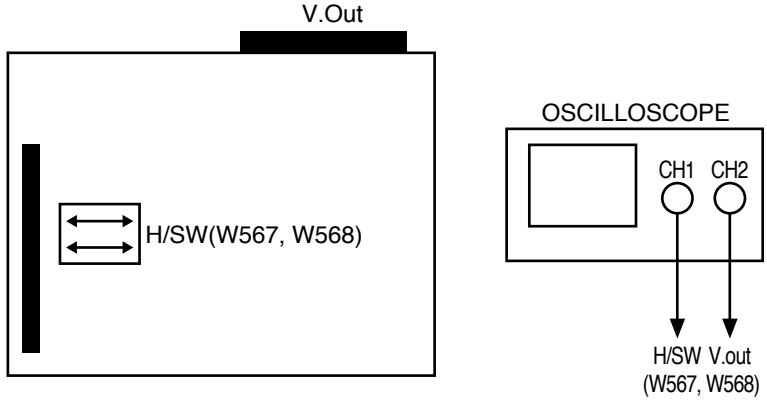
c) Press the Auto PG Key on JIG Remocon again (2’nd) or press “REC” key on set and “CLEAR” key on Remocon again.(Then check the blink “PG NG > PG OK” on CLK/LED.)

• **Check the PG**

a) Connect the CH1 of the oscilloscope to the H/SW and CH2 to the Video out for the VCR.

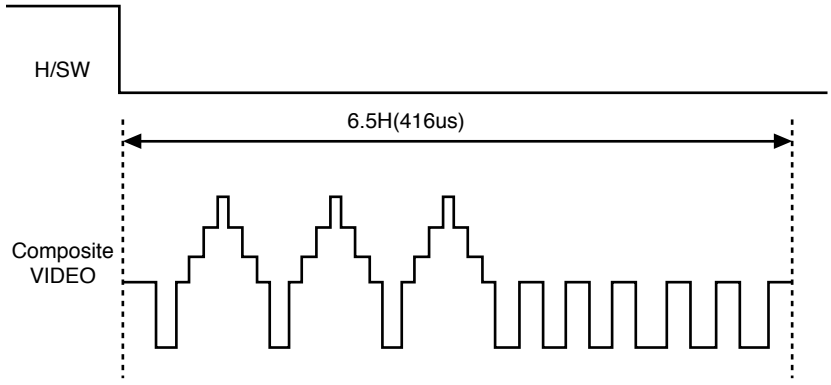
b) Trigger the mixed Video Signal of CH2 to the CH1 H/SW(W567, W568), and then check the distance (time difference), which is from the selected A(B) Head point of the H/SW(W567, W568) signal to the starting point of the vertical synchronized signal, to 6.5H ± 0.5H (416μs, 1H=64.0μs).

• **CONNECTION**



ELECTRICAL ADJUSTMENT PROCEDURES

• **WAVEFORM**



• **Attension and Reference**

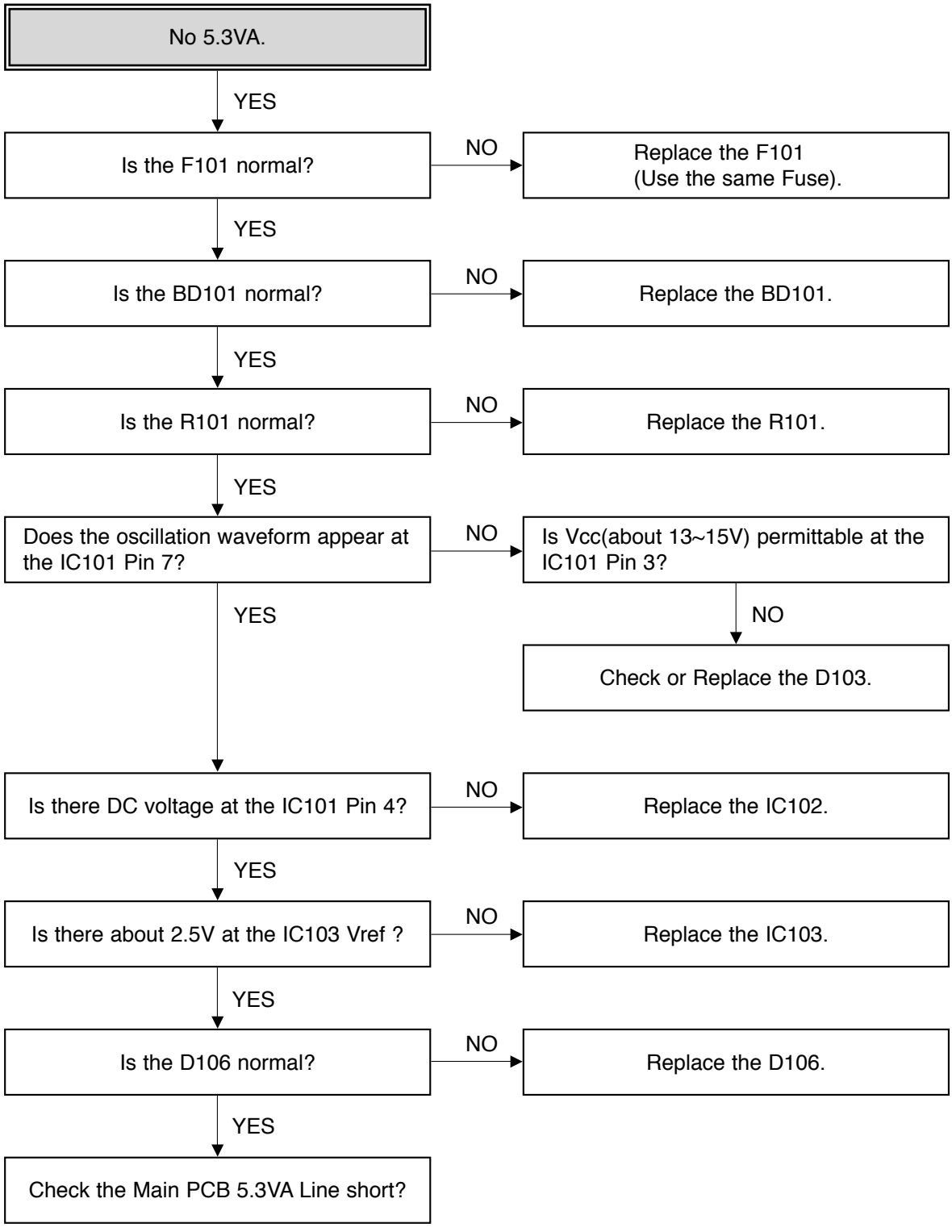
a) The PG checking must do when RF Level is Maximum and SERVO system is Locking (MTR MODE)

b) V.H/SW Level is 2Vpp.

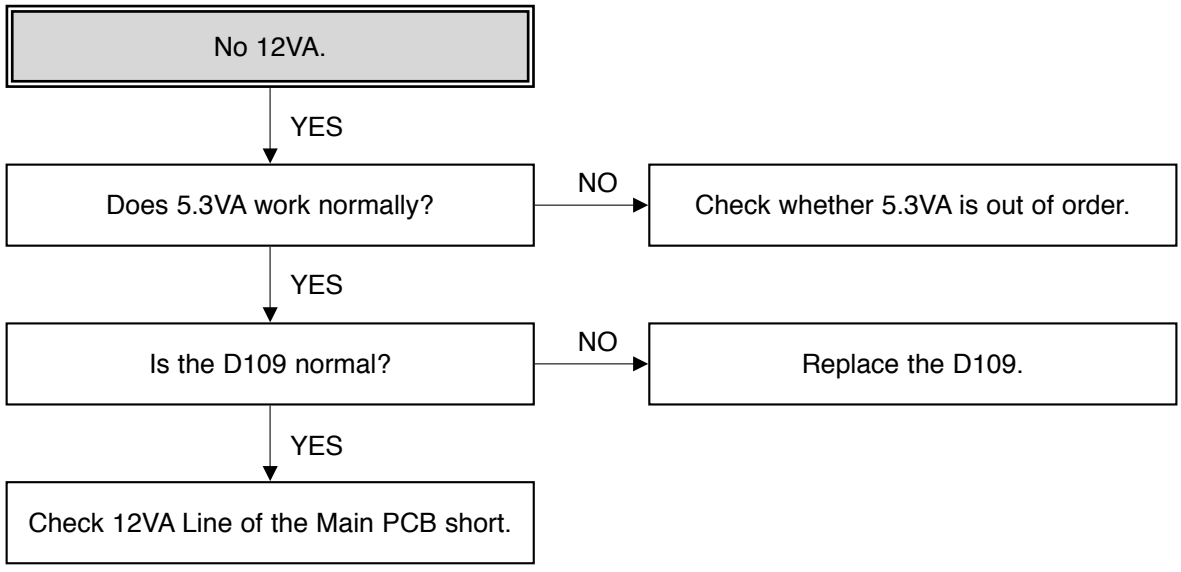
ELECTRICAL TROUBLESHOOTING GUIDE

1. Power Circuit(SMPS)

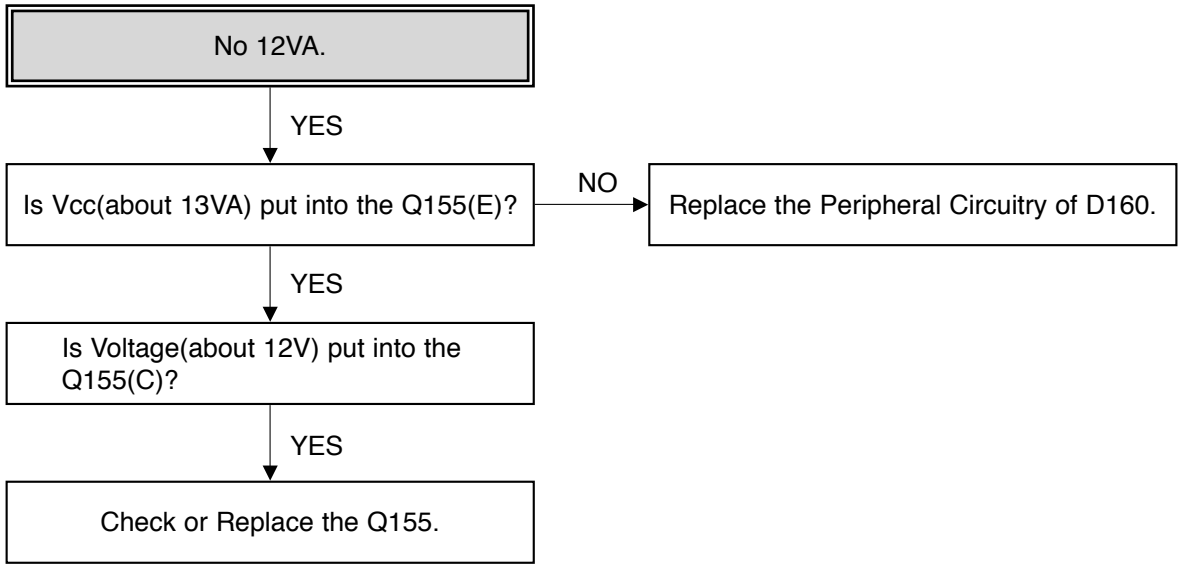
(1) No 5.3VA.



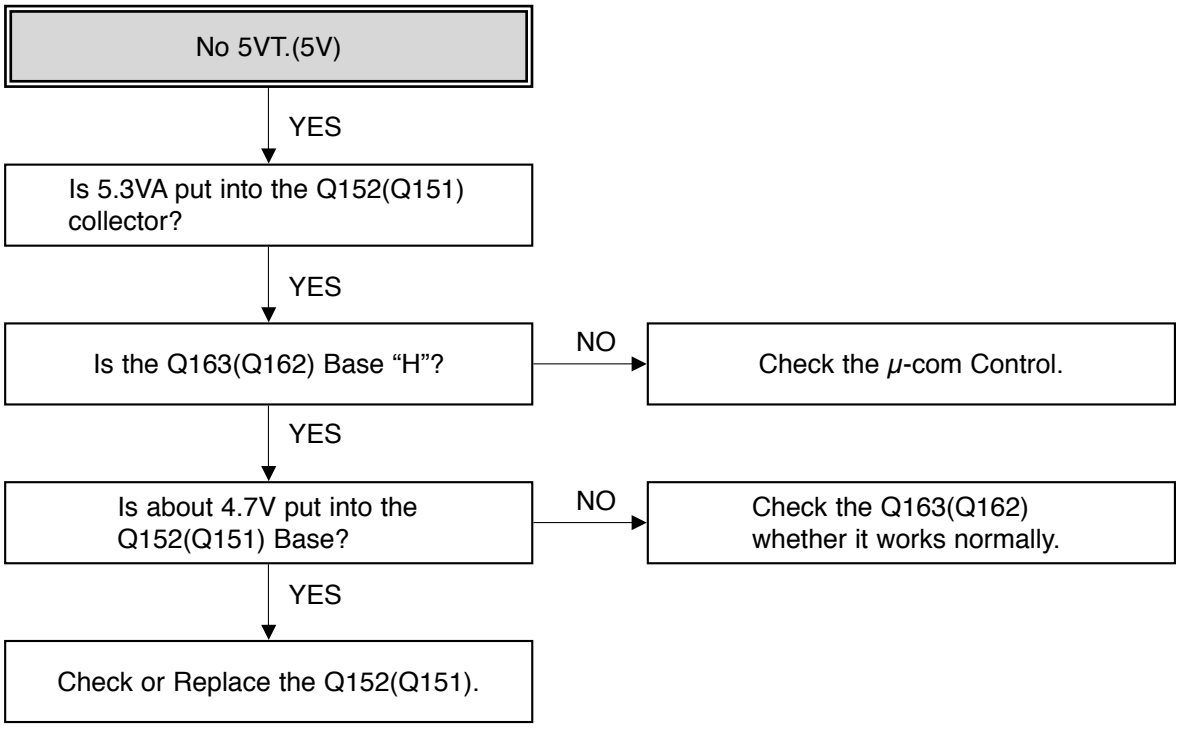
(2) No 12VA.(Capstan)



(3) No 12VA (CANAL, Buffer)

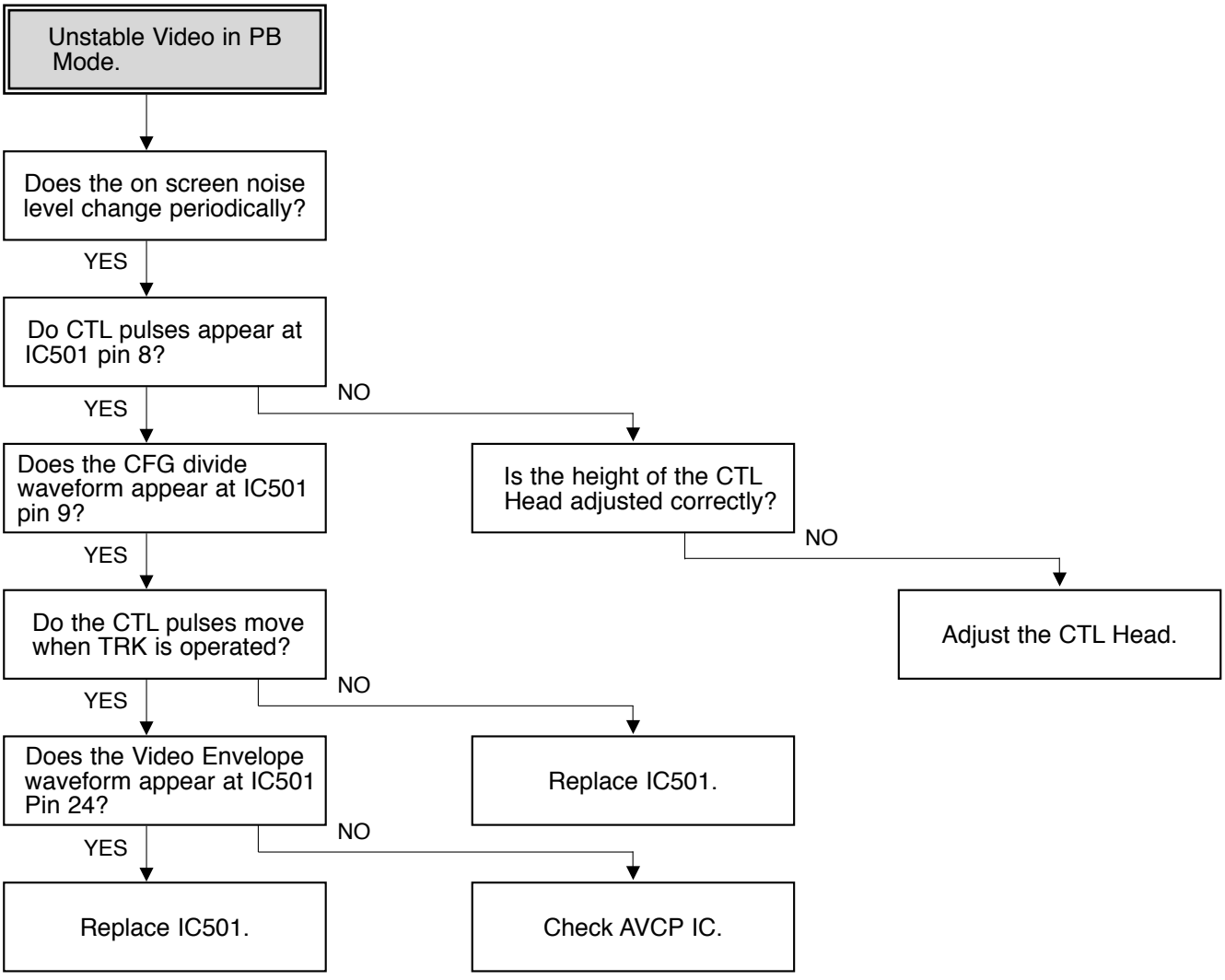


(4) No 5VT(5V)

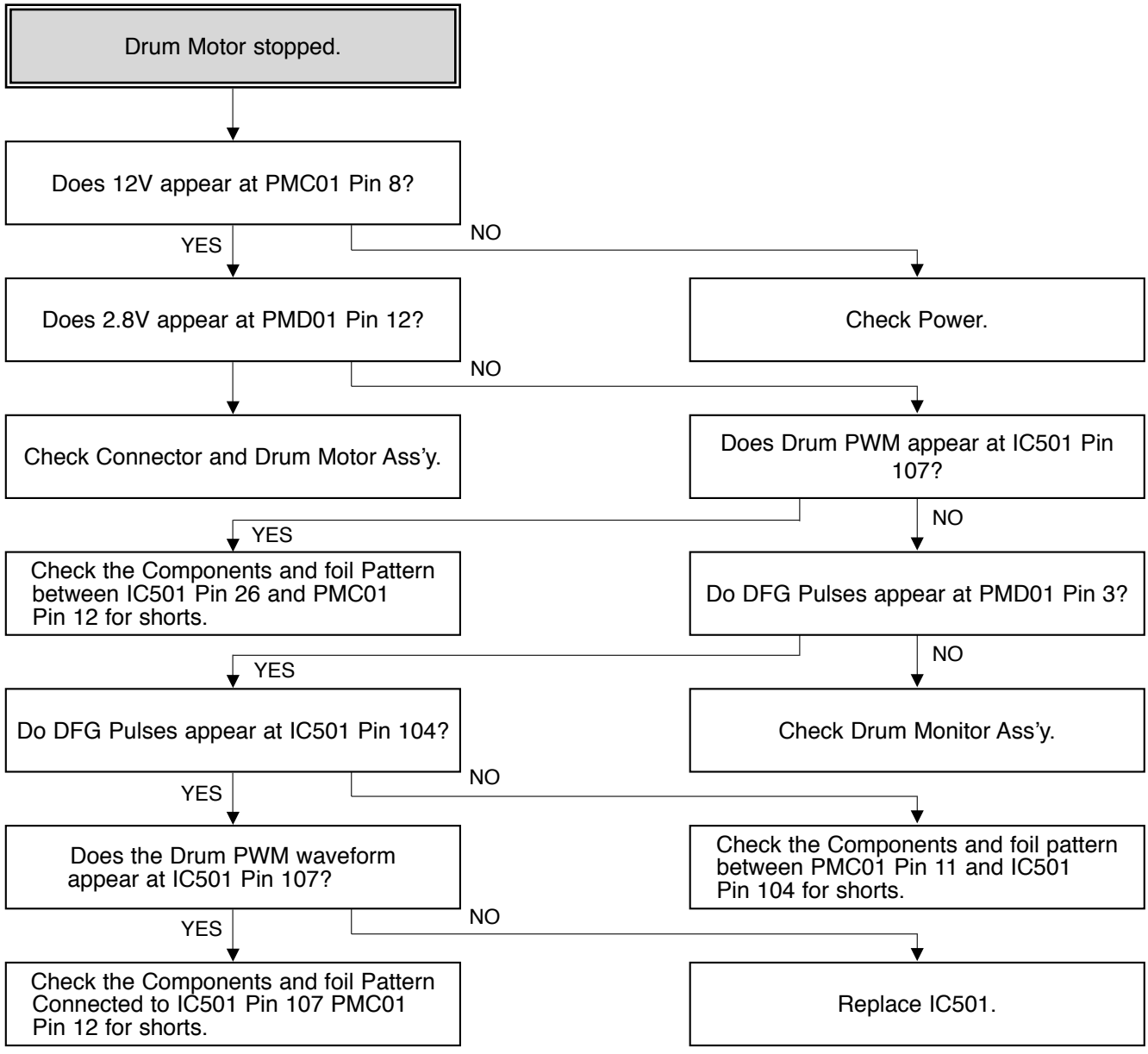

No 5VT.(5V)
YES
Is 5.3VA put into the Q152(Q151) collector?
YES
Is the Q163(Q162) Base “H”?
NO
Check the μ-com Control.
YES
Is about 4.7V put into the Q152(Q151) Base?
NO
Check the Q163(Q162) whether it works normally.
YES
Check or Replace the Q152(Q151).

2. Servo Circuit

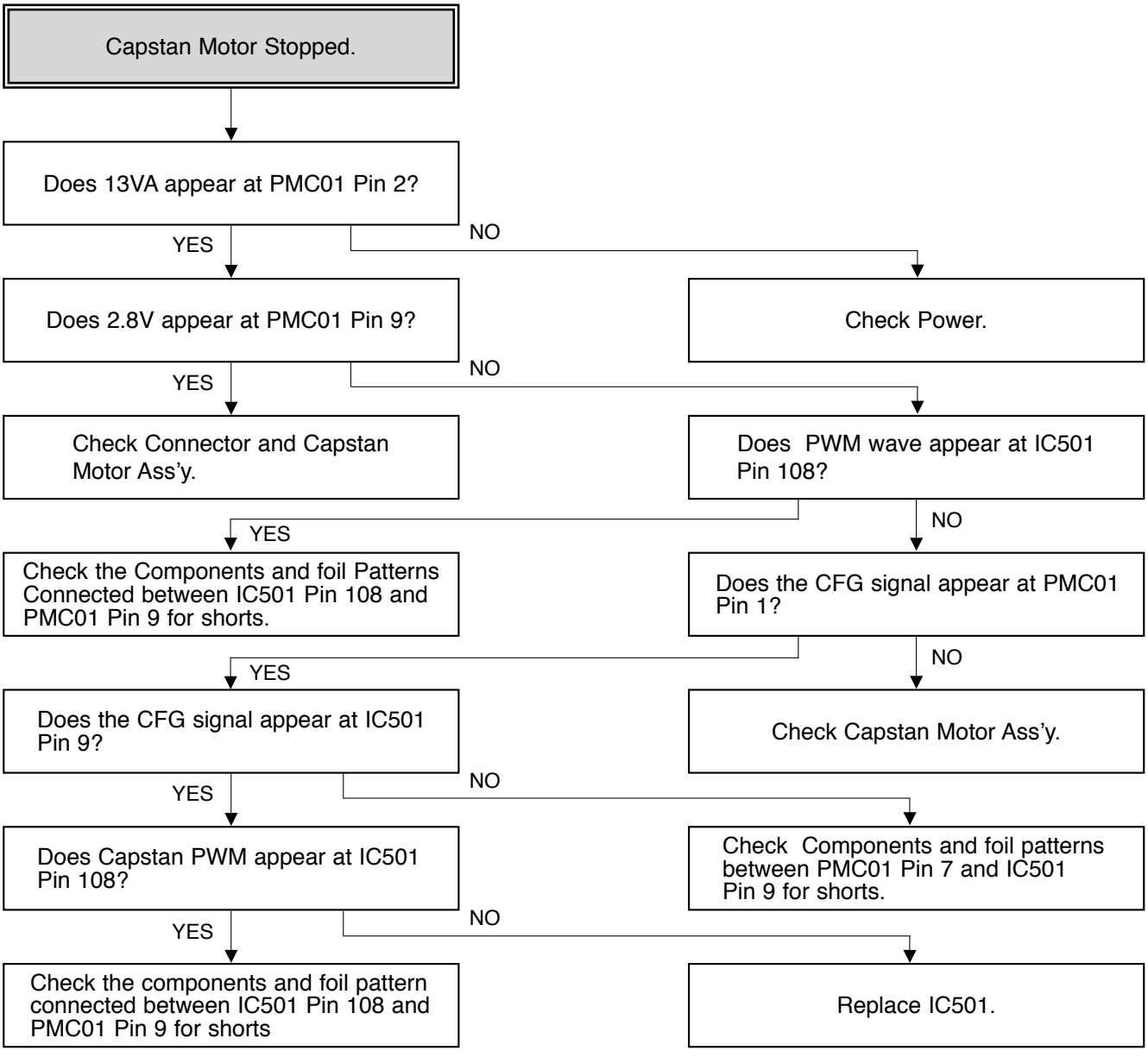
A.


Unstable Video in PB Mode.
Does the on screen noise level change periodically?
YES
Do CTL pulses appear at IC501 pin 8?
NO
YES
Does the CFG divide waveform appear at IC501 pin 9?
Is the height of the CTL Head adjusted correctly?
NO
YES
Adjust the CTL Head.
Do the CTL pulses move when TRK is operated?
NO
YES
Does the Video Envelope waveform appear at IC501 Pin 24?
Replace IC501.
NO
YES
Replace IC501.
Check AVCP IC.

B.

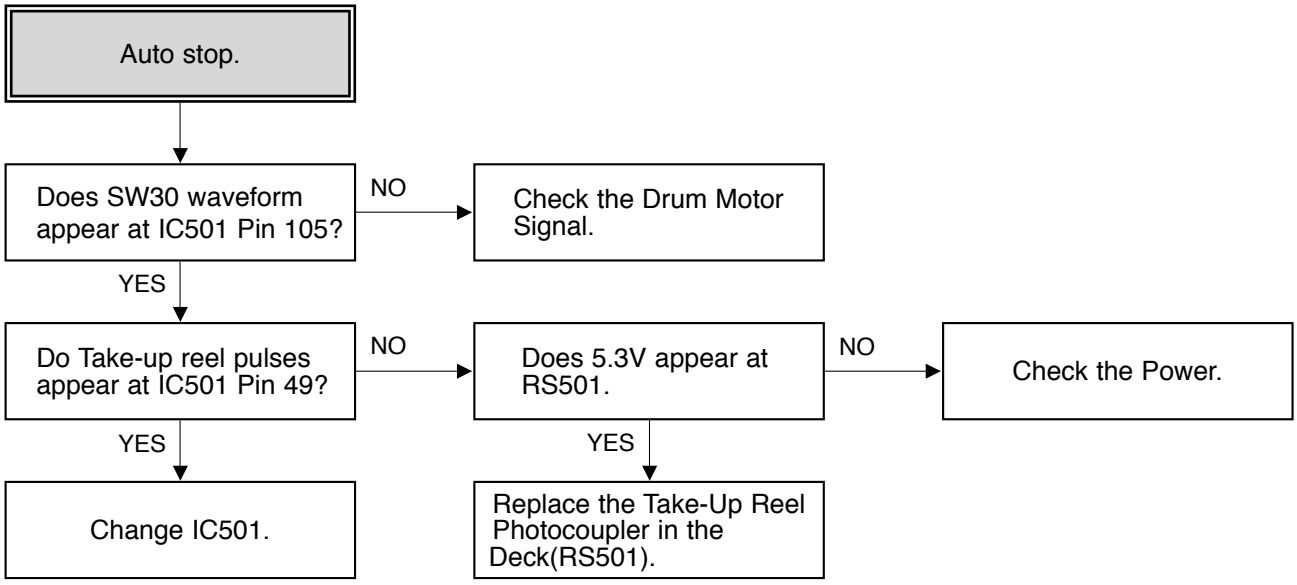

Drum Motor stopped.
Does 12V appear at PMC01 Pin 8?
NO
YES
Check Power.
Does 2.8V appear at PMD01 Pin 12?
NO
Check Connector and Drum Motor Ass'y.
Does Drum PWM appear at IC501 Pin 107?
NO
YES
Check the Components and foil Pattern between IC501 Pin 26 and PMC01 Pin 12 for shorts.
Do DFG Pulses appear at PMD01 Pin 3?
NO
YES
Do DFG Pulses appear at IC501 Pin 104?
Check Drum Monitor Ass'y.
NO
YES
Does the Drum PWM waveform appear at IC501 Pin 107?
Check the Components and foil pattern between PMC01 Pin 11 and IC501 Pin 104 for shorts.
NO
YES
Check the Components and foil Pattern Connected to IC501 Pin 107 PMC01 Pin 12 for shorts.
Replace IC501.

C.

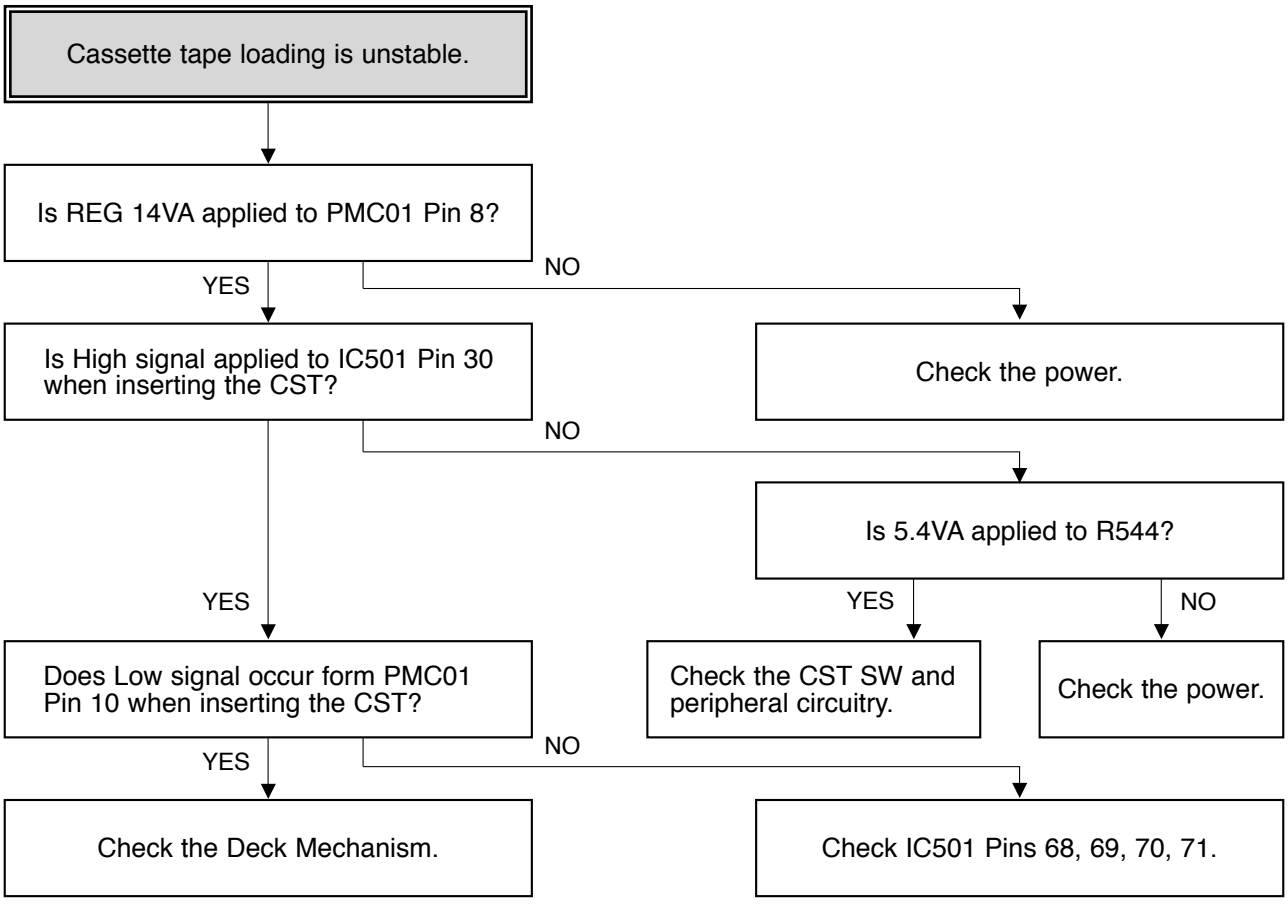

Capstan Motor Stopped.
Does 13VA appear at PMC01 Pin 2?
YES
NO
Does 2.8V appear at PMC01 Pin 9?
Check Power.
YES
NO
Check Connector and Capstan Motor Ass'y.
Does PWM wave appear at IC501 Pin 108?
YES
NO
Check the Components and foil Patterns Connected between IC501 Pin 108 and PMC01 Pin 9 for shorts.
Does the CFG signal appear at PMC01 Pin 1?
YES
NO
Does the CFG signal appear at IC501 Pin 9?
Check Capstan Motor Ass'y.
YES
NO
Does Capstan PWM appear at IC501 Pin 108?
Check Components and foil patterns between PMC01 Pin 7 and IC501 Pin 9 for shorts.
YES
NO
Check the components and foil pattern connected between IC501 Pin 108 and PMC01 Pin 9 for shorts
Replace IC501.

3. System & Front Panel Circuit

A.

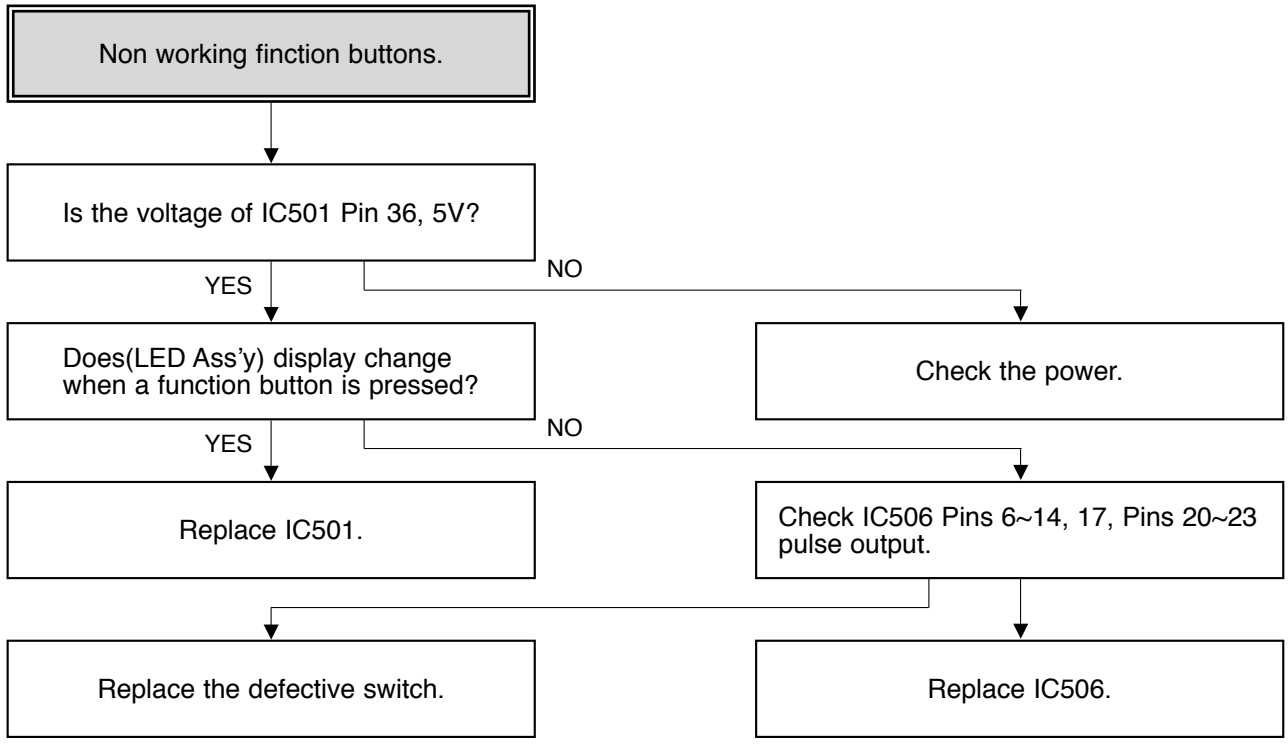


B.


Cassette tape loading is unstable.
Is REG 14VA applied to PMC01 Pin 8?
YES
NO
Is High signal applied to IC501 Pin 30 when inserting the CST?
Check the power.
NO
Is 5.4VA applied to R544?
YES
YES
NO
Does Low signal occur form PMC01 Pin 10 when inserting the CST?
Check the CST SW and peripheral circuitry.
Check the power.
YES
NO
Check the Deck Mechanism.
Check IC501 Pins 68, 69, 70, 71.

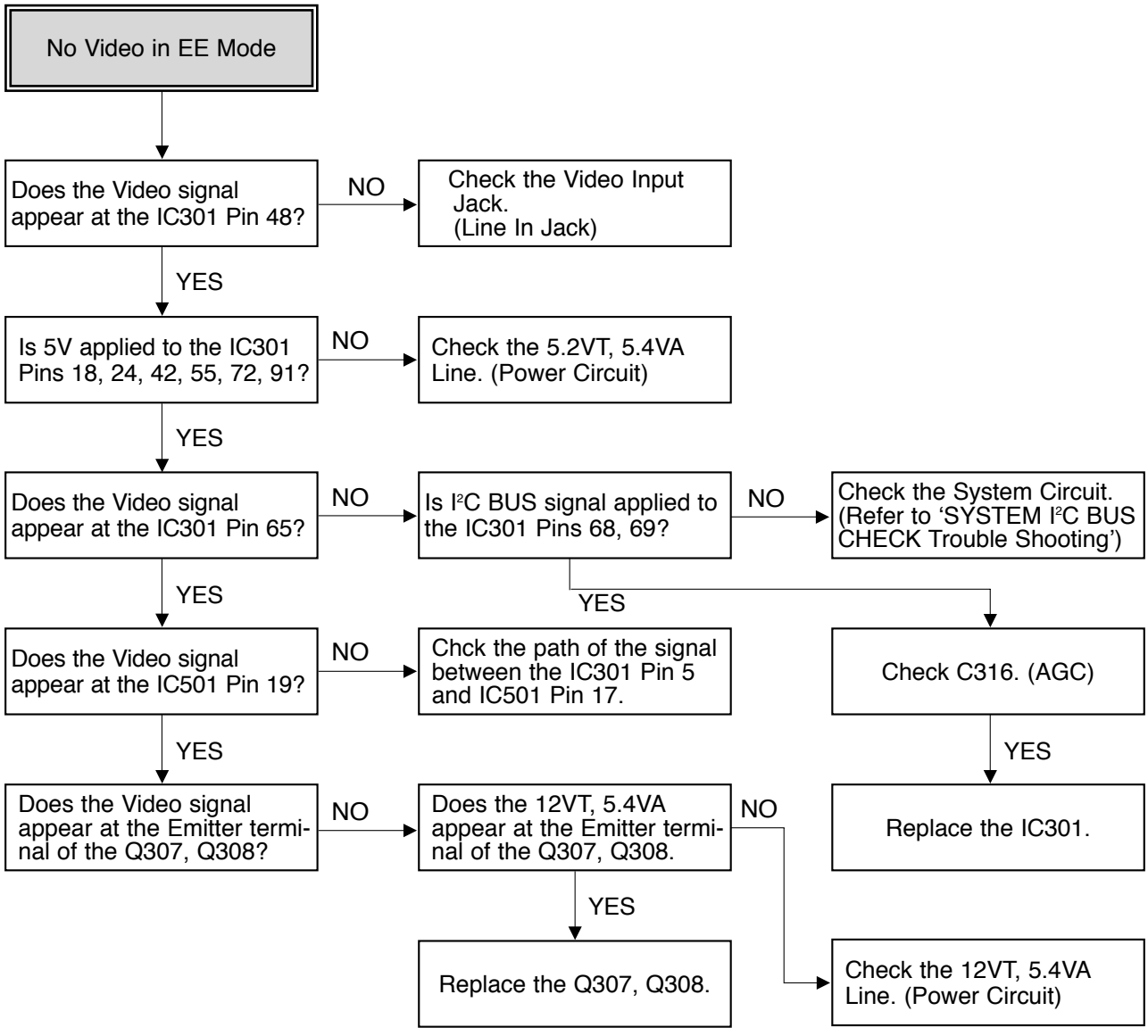
NOTE : Auto stop may also be caused by lack of lubrication,due to dried grease or oil.

C.

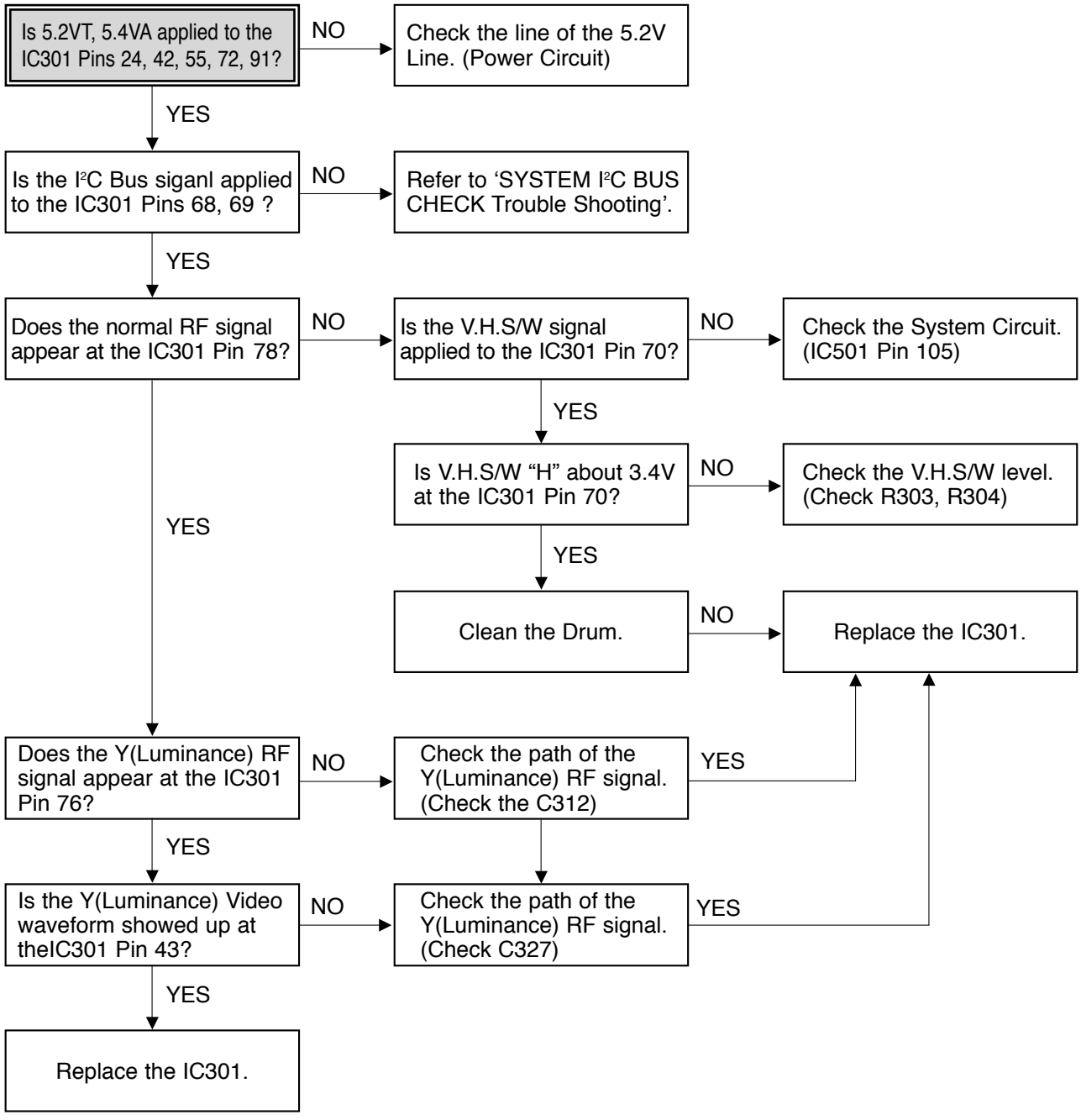


4. Y/C CIRCUIT

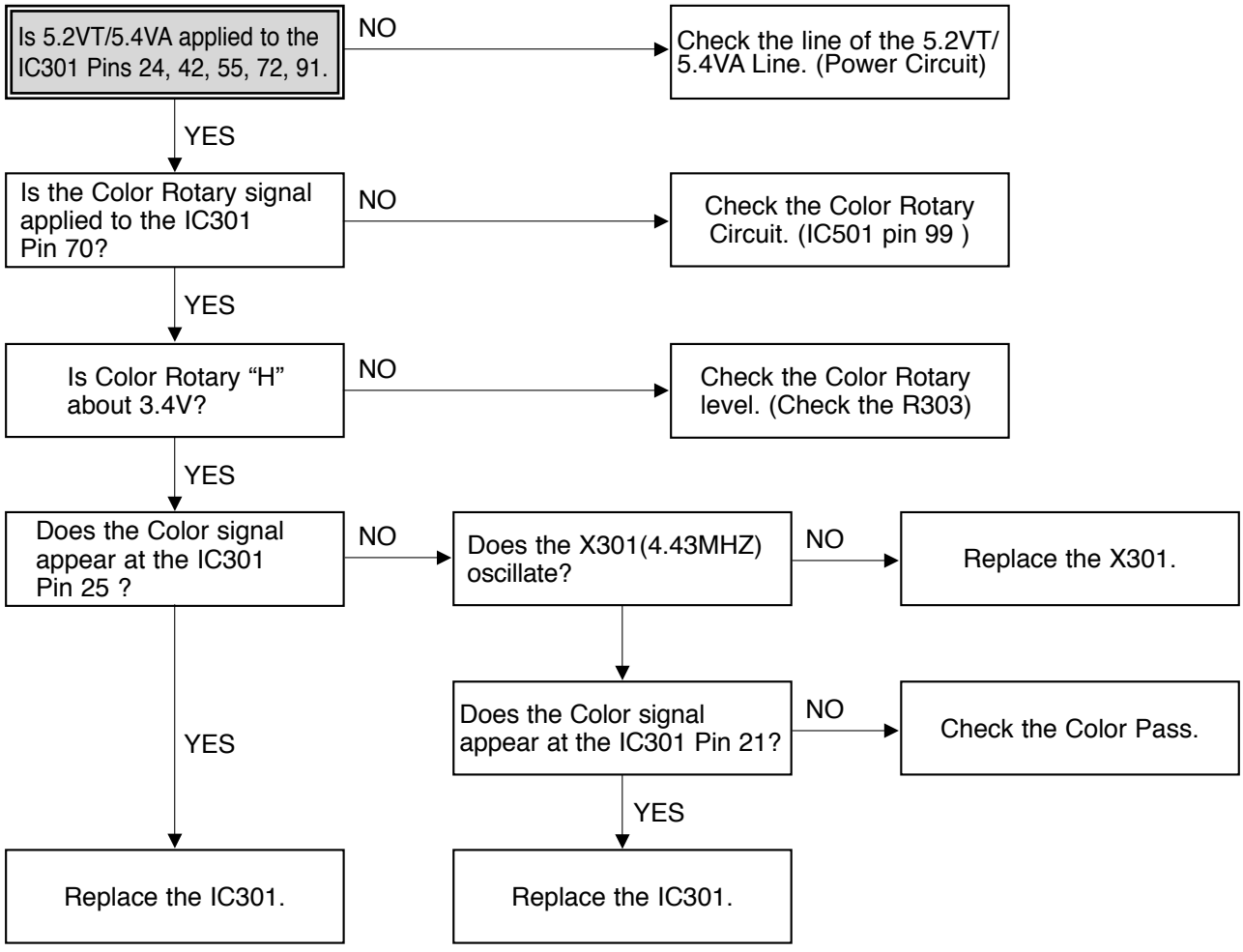
(1) No Video in EE Mode,


No Video in EE Mode
Does the Video signal appear at the IC301 Pin 48?
NO
Check the Video Input Jack. (Line In Jack)
YES
Is 5V applied to the IC301 Pins 18, 24, 42, 55, 72, 91?
NO
Check the 5.2VT, 5.4VA Line. (Power Circuit)
YES
Does the Video signal appear at the IC301 Pin 65?
NO
Is I²C BUS signal applied to the IC301 Pins 68, 69?
NO
Check the System Circuit. (Refer to 'SYSTEM I²C BUS CHECK Trouble Shooting')
YES
YES
Does the Video signal appear at the IC501 Pin 19?
NO
Chck the path of the signal between the IC301 Pin 5 and IC501 Pin 17.
Check C316. (AGC)
YES
YES
Does the Video signal appear at the Emitter terminal of the Q307, Q308?
NO
Does the 12VT, 5.4VA appear at the Emitter terminal of the Q307, Q308.
NO
Replace the IC301.
YES
Replace the Q307, Q308.
Check the 12VT, 5.4VA Line. (Power Circuit)

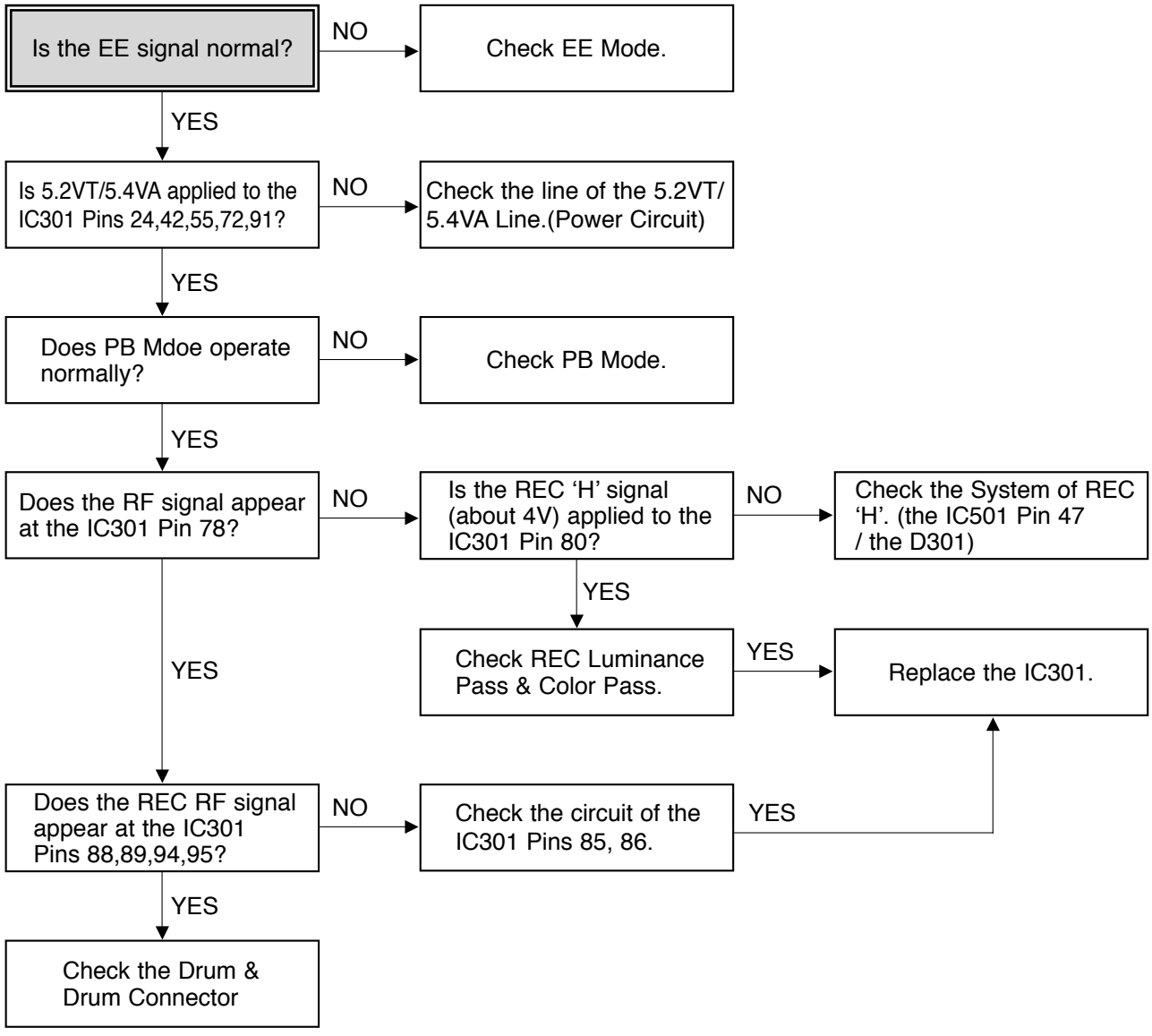
(2) When the Y(Luminance) signal doesn't appear on the screen in PB Mode,


Is 5.2VT, 5.4VA applied to the IC301 Pins 24, 42, 55, 72, 91?
NO
Check the line of the 5.2V Line. (Power Circuit)
YES
Is the I²C Bus siganl applied to the IC301 Pins 68, 69 ?
NO
Refer to 'SYSTEM I²C BUS CHECK Trouble Shooting'.
YES
Does the normal RF signal appear at the IC301 Pin 78?
NO
Is the V.H.S/W signal applied to the IC301 Pin 70?
NO
Check the System Circuit. (IC501 Pin 105)
YES
Is V.H.S/W "H" about 3.4V at the IC301 Pin 70?
NO
Check the V.H.S/W level. (Check R303, R304)
YES
YES
Clean the Drum.
NO
Replace the IC301.
Does the Y(Luminance) RF signal appear at the IC301 Pin 76?
NO
Check the path of the Y(Luminance) RF signal. (Check the C312)
YES
YES
Is the Y(Luminance) Video waveform showed up at theIC301 Pin 43?
NO
Check the path of the Y(Luminance) RF signal. (Check C327)
YES
YES
Replace the IC301.

(3) When the C(Color) signal doesn't appear on the screen in PB Mode,

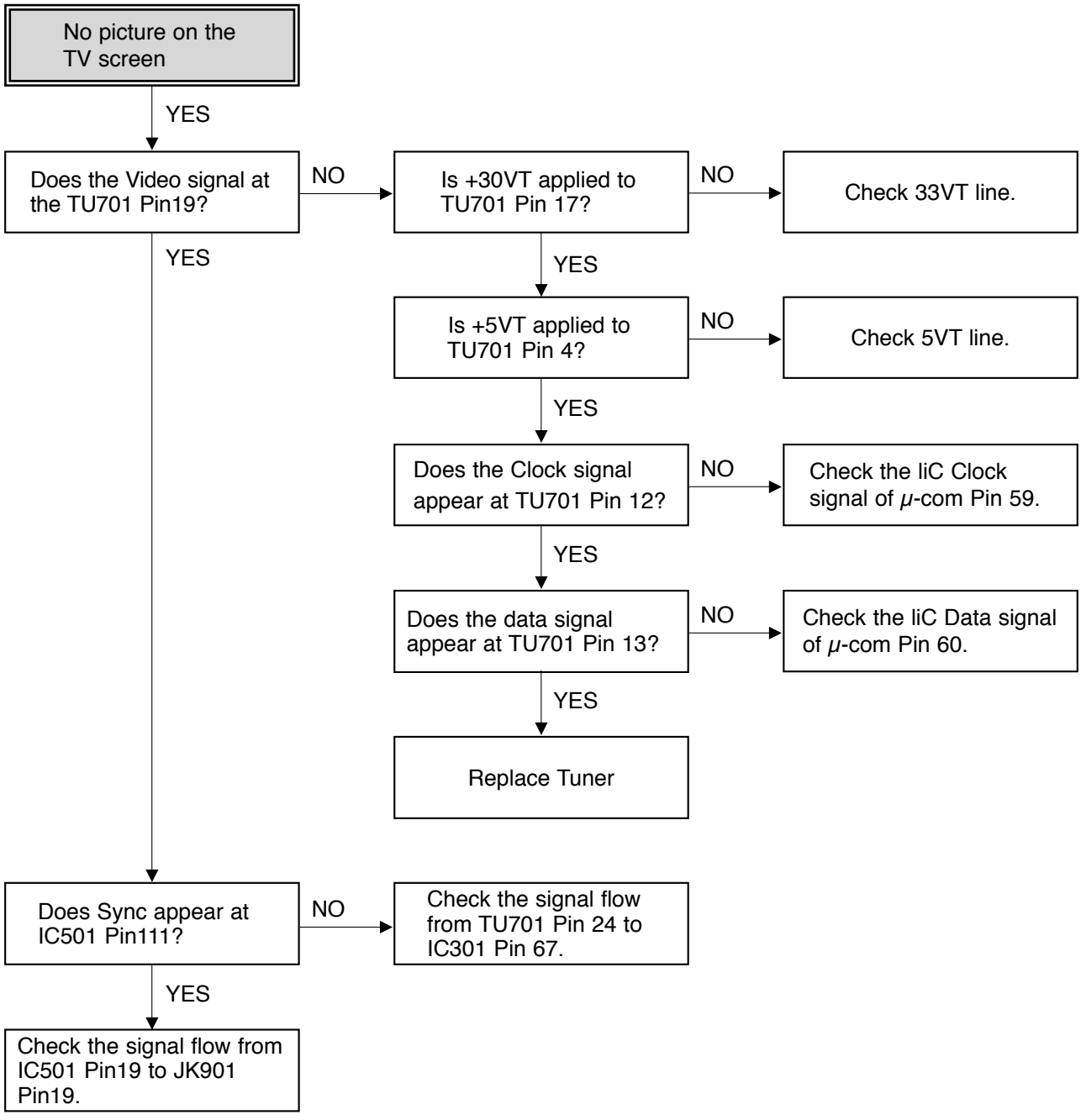

Is 5.2VT/5.4VA applied to the IC301 Pins 24, 42, 55, 72, 91.
NO
Check the line of the 5.2VT/ 5.4VA Line. (Power Circuit)
YES
Is the Color Rotary signal applied to the IC301 Pin 70?
NO
Check the Color Rotary Circuit. (IC501 pin 99)
YES
Is Color Rotary "H" about 3.4V?
NO
Check the Color Rotary level. (Check the R303)
YES
Does the Color signal appear at the IC301 Pin 25 ?
NO
Does the X301(4.43MHZ) oscillate?
NO
Replace the X301.
YES
Does the Color signal appear at the IC301 Pin 21?
NO
Check the Color Pass.
YES
Replace the IC301.
Replace the IC301.

(4) When the Video signal doesn't appear on the screen in REC Mode,

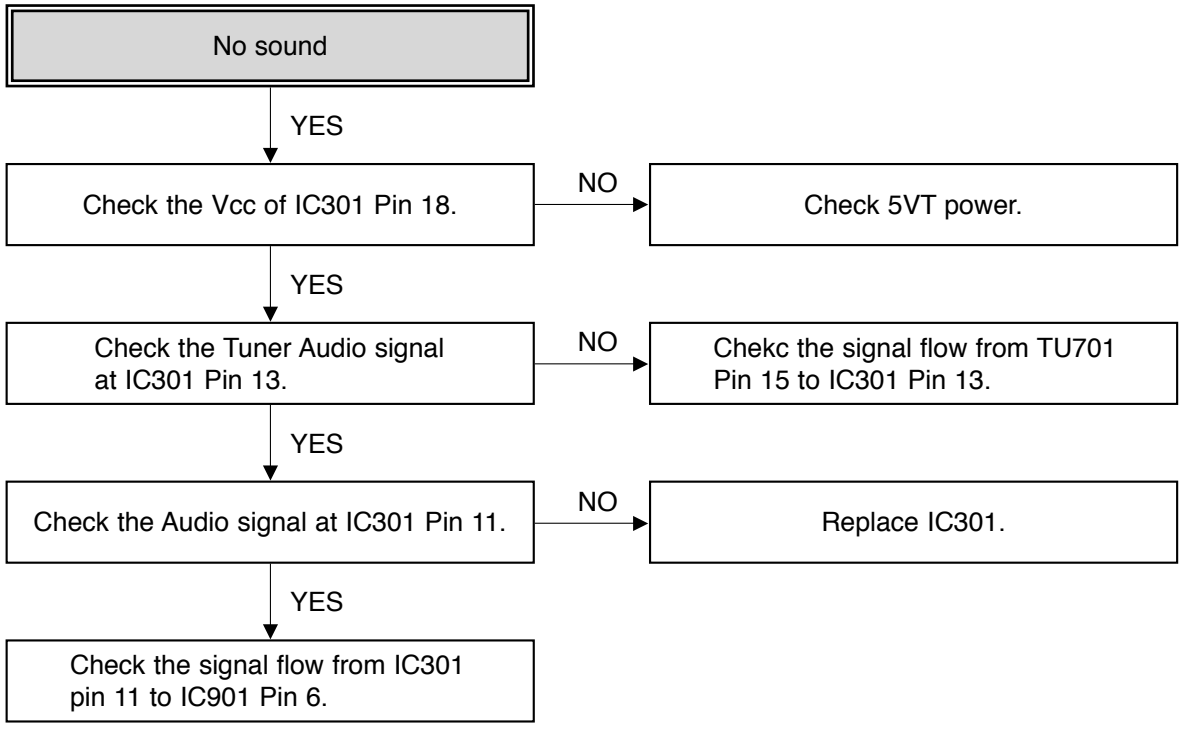

Is the EE signal normal?
NO
Check EE Mode.
YES
Is 5.2VT/5.4VA applied to the IC301 Pins 24,42,55,72,91?
NO
Check the line of the 5.2VT/ 5.4VA Line.(Power Circuit)
YES
Does PB Mdoe operate normally?
NO
Check PB Mode.
YES
Does the RF signal appear at the IC301 Pin 78?
NO
Is the REC 'H' signal (about 4V) applied to the IC301 Pin 80?
NO
Check the System of REC 'H'. (the IC501 Pin 47 / the D301)
YES
YES
Check REC Luminance Pass & Color Pass.
YES
Replace the IC301.
Does the REC RF signal appear at the IC301 Pins 88,89,94,95?
NO
Check the circuit of the IC301 Pins 85, 86.
YES
YES
Check the Drum & Drum Connector

5. Tuner/IF circuit

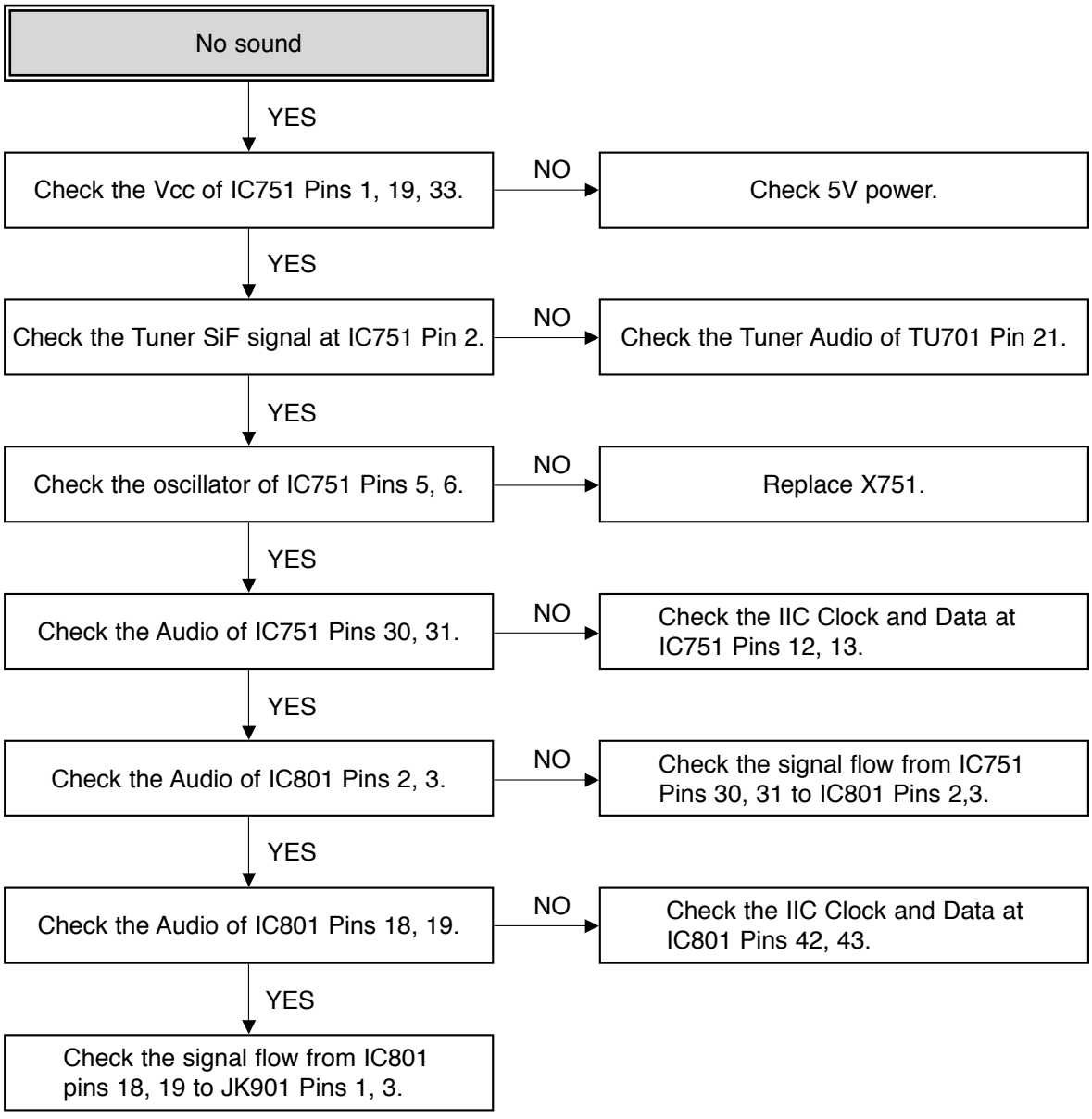
(1) No picture on the TV screen


No picture on the TV screen
YES
Does the Video signal at the TU701 Pin19?
NO
Is +30VT applied to TU701 Pin 17?
NO
Check 33VT line.
YES
YES
Is +5VT applied to TU701 Pin 4?
NO
Check 5VT line.
YES
Does the Clock signal appear at TU701 Pin 12?
NO
Check the liC Clock signal of μ-com Pin 59.
YES
Does the data signal appear at TU701 Pin 13?
NO
Check the liC Data signal of μ-com Pin 60.
YES
Replace Tuner
Does Sync appear at IC501 Pin111?
NO
Check the signal flow from TU701 Pin 24 to IC301 Pin 67.
YES
Check the signal flow from IC501 Pin19 to JK901 Pin19.

(2) No sound (Mono Model)

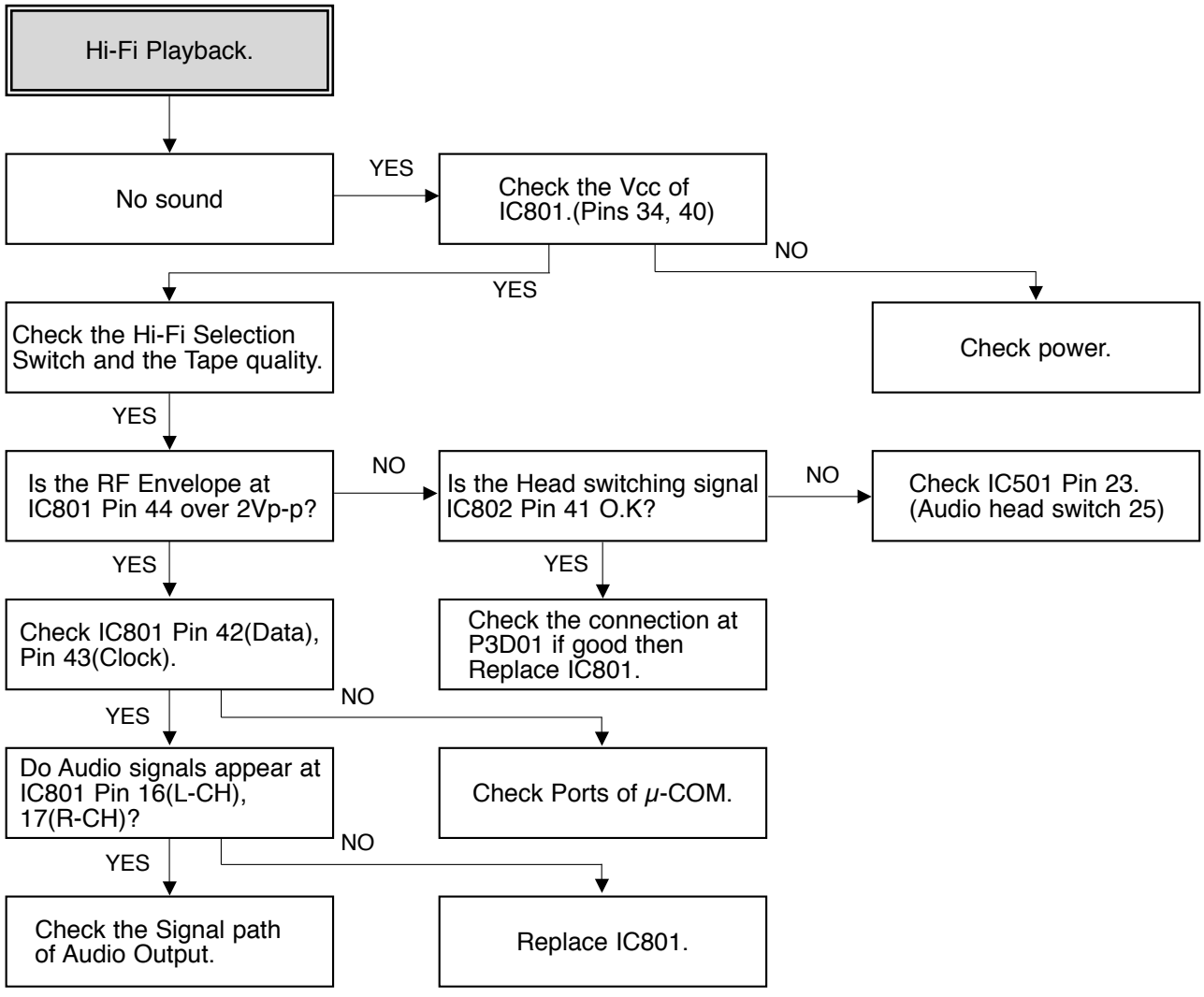

No sound
YES
Check the Vcc of IC301 Pin 18.
NO
Check 5VT power.
YES
Check the Tuner Audio signal at IC301 Pin 13.
NO
Chekc the signal flow from TU701 Pin 15 to IC301 Pin 13.
YES
Check the Audio signal at IC301 Pin 11.
NO
Replace IC301.
YES
Check the signal flow from IC301 pin 11 to IC901 Pin 6.

(3) No sound (Hi-Fi Model)

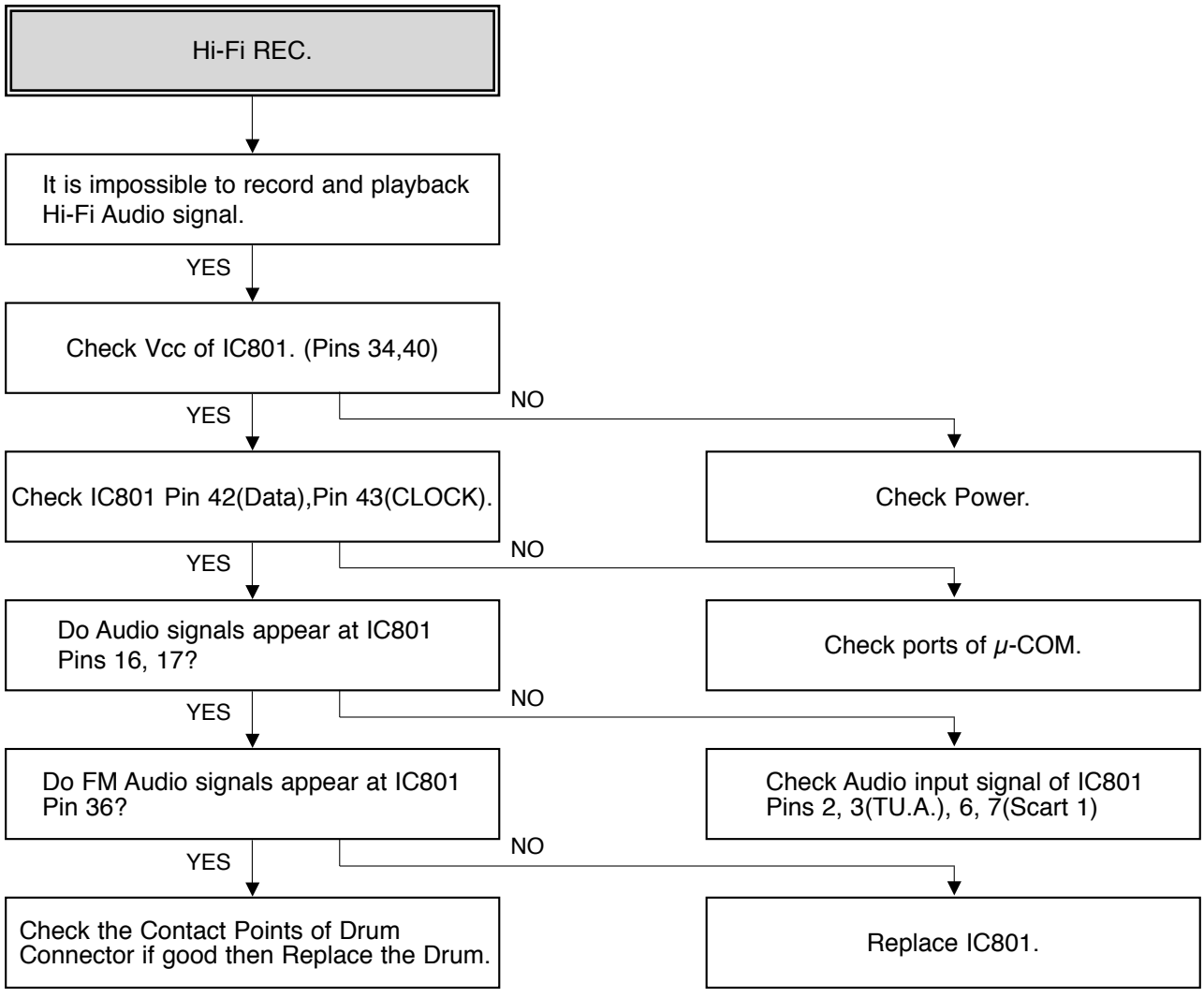

No sound
YES
Check the Vcc of IC751 Pins 1, 19, 33.
NO
Check 5V power.
YES
Check the Tuner SiF signal at IC751 Pin 2.
NO
Check the Tuner Audio of TU701 Pin 21.
YES
Check the oscillator of IC751 Pins 5, 6.
NO
Replace X751.
YES
Check the Audio of IC751 Pins 30, 31.
NO
Check the IIC Clock and Data at IC751 Pins 12, 13.
YES
Check the Audio of IC801 Pins 2, 3.
NO
Check the signal flow from IC751 Pins 30, 31 to IC801 Pins 2,3.
YES
Check the Audio of IC801 Pins 18, 19.
NO
Check the IIC Clock and Data at IC801 Pins 42, 43.
YES
Check the signal flow from IC801 pins 18, 19 to JK901 Pins 1, 3.

6. Hi-Fi Circuit (Hi-Fi Model)

A.

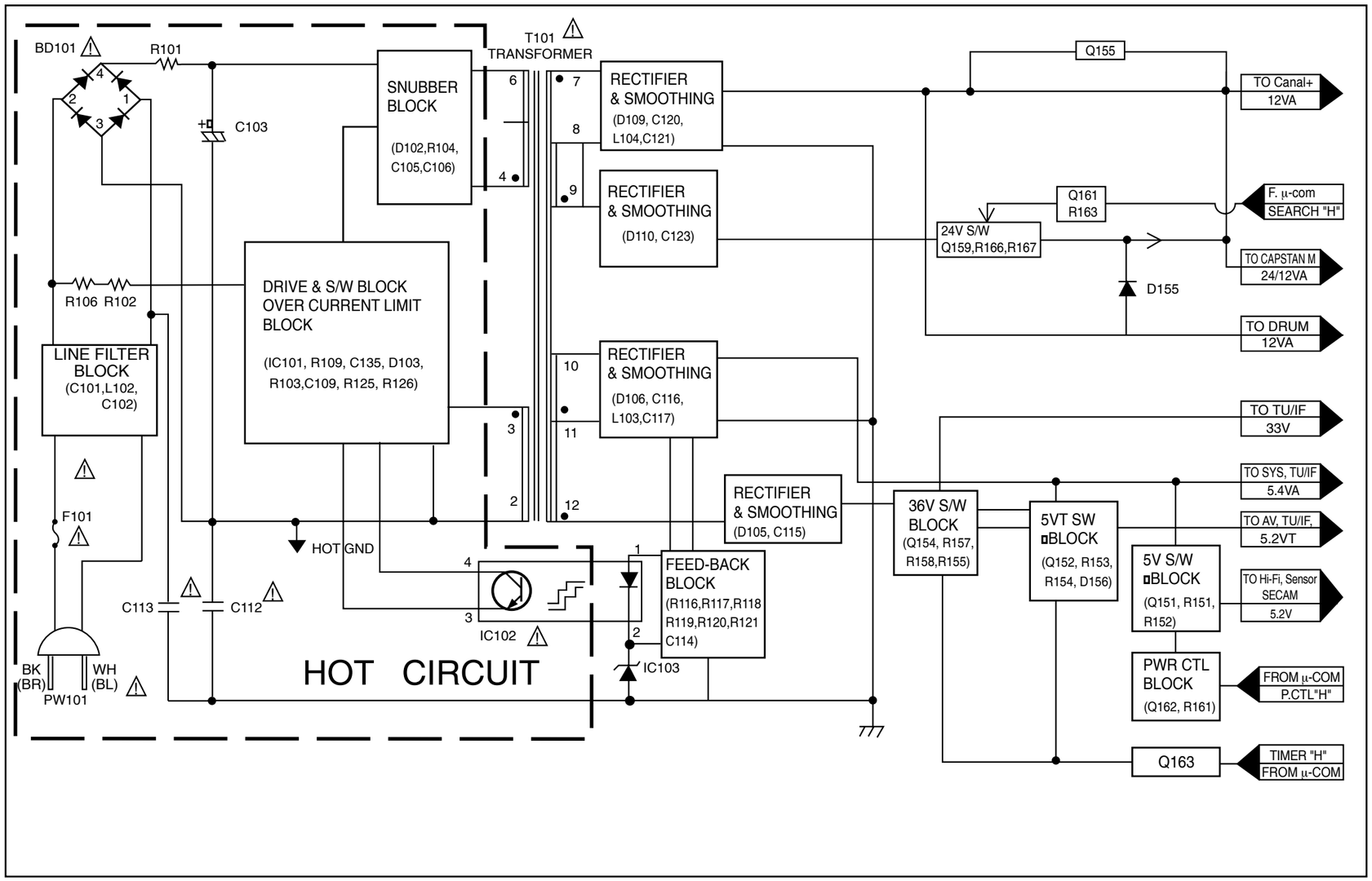


B.


Hi-Fi REC.
It is impossible to record and playback Hi-Fi Audio signal.
YES
Check Vcc of IC801. (Pins 34,40)
NO
YES
Check Power.
Check IC801 Pin 42(Data),Pin 43(CLOCK).
NO
YES
Check ports of μ-COM.
Do Audio signals appear at IC801 Pins 16, 17?
NO
YES
Check Audio input signal of IC801 Pins 2, 3(TU.A.), 6, 7(Scart 1)
Do FM Audio signals appear at IC801 Pin 36?
NO
YES
Replace IC801.
Check the Contact Points of Drum Connector if good then Replace the Drum.

BLOCK DIAGRAMS

1. Power Block Diagram

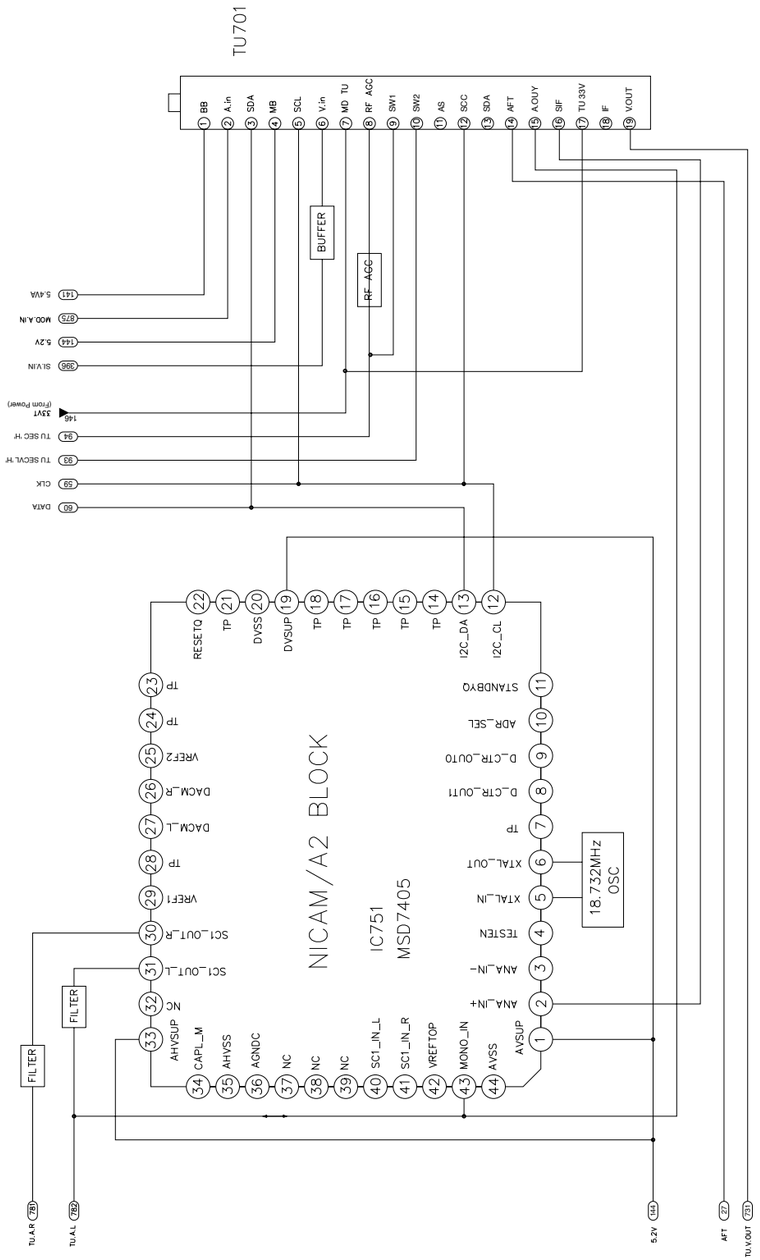


'00 11. 30

NOTES : Symbol denotes AC ground.

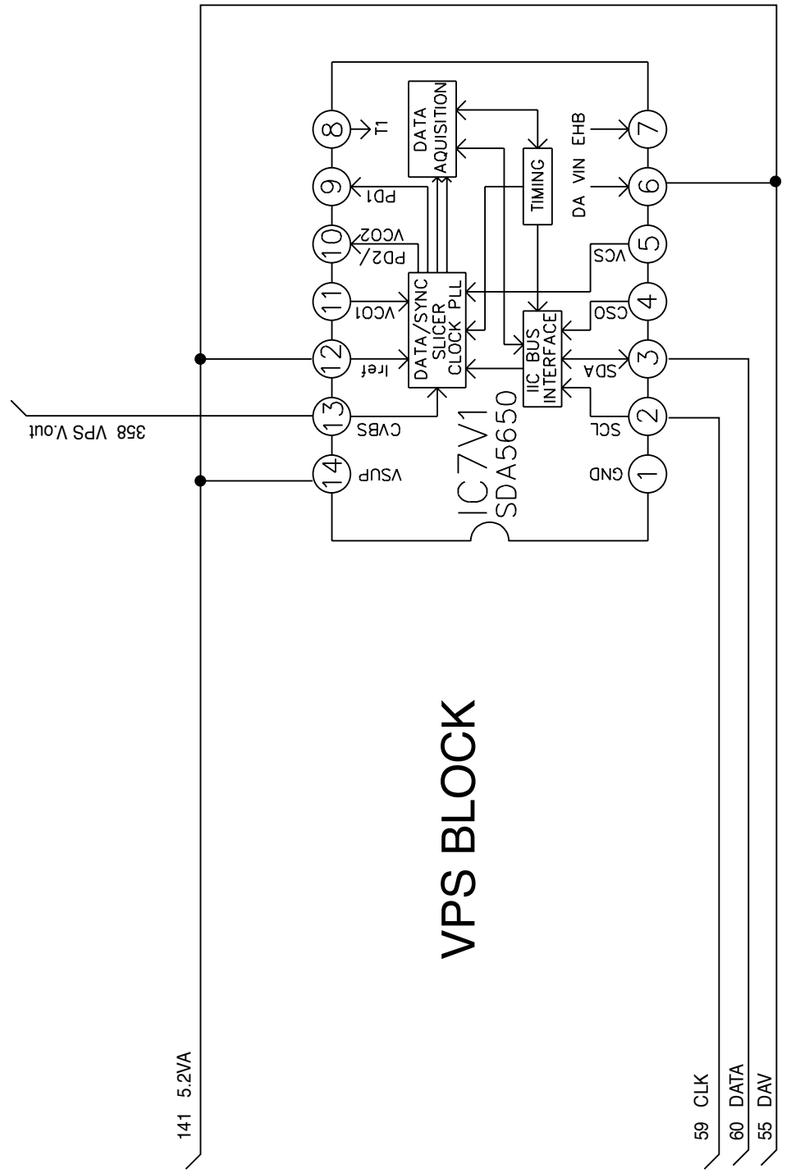
Symbol denotes DC chassis ground.

2. Tu/IF, NICAM & A2 Block Diagram



'04 1.18 R10488BA

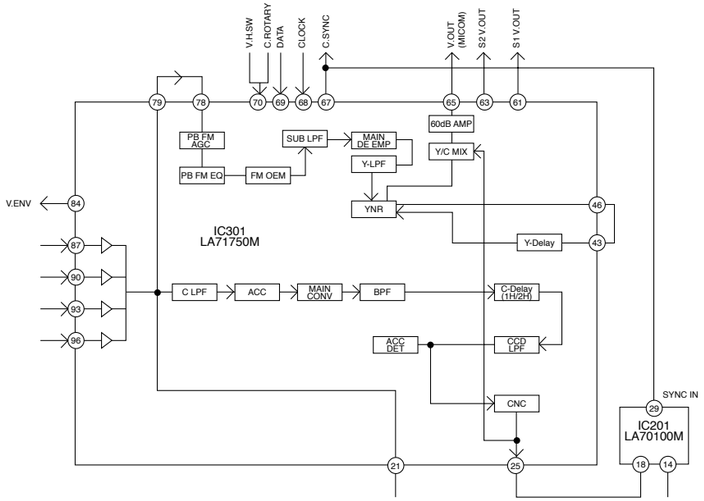
3. VPS Block Diagram



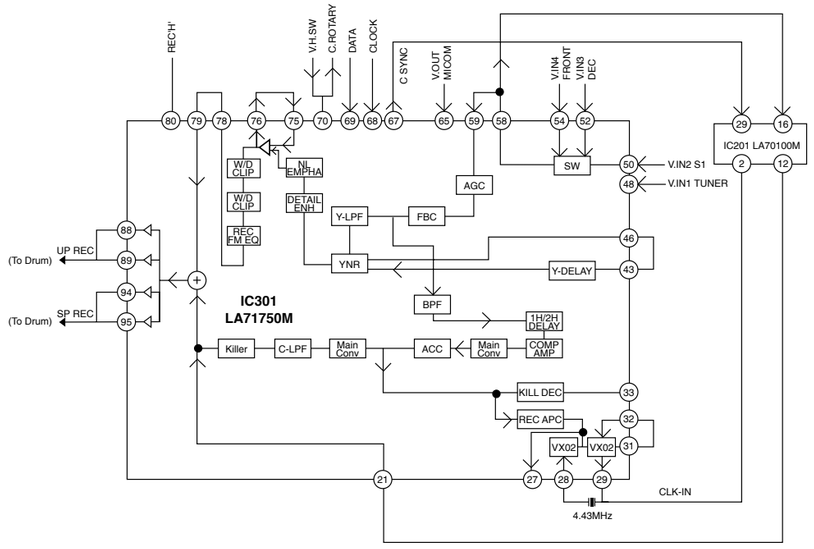
VPS BLOCK

4. Y/C Block Diagram

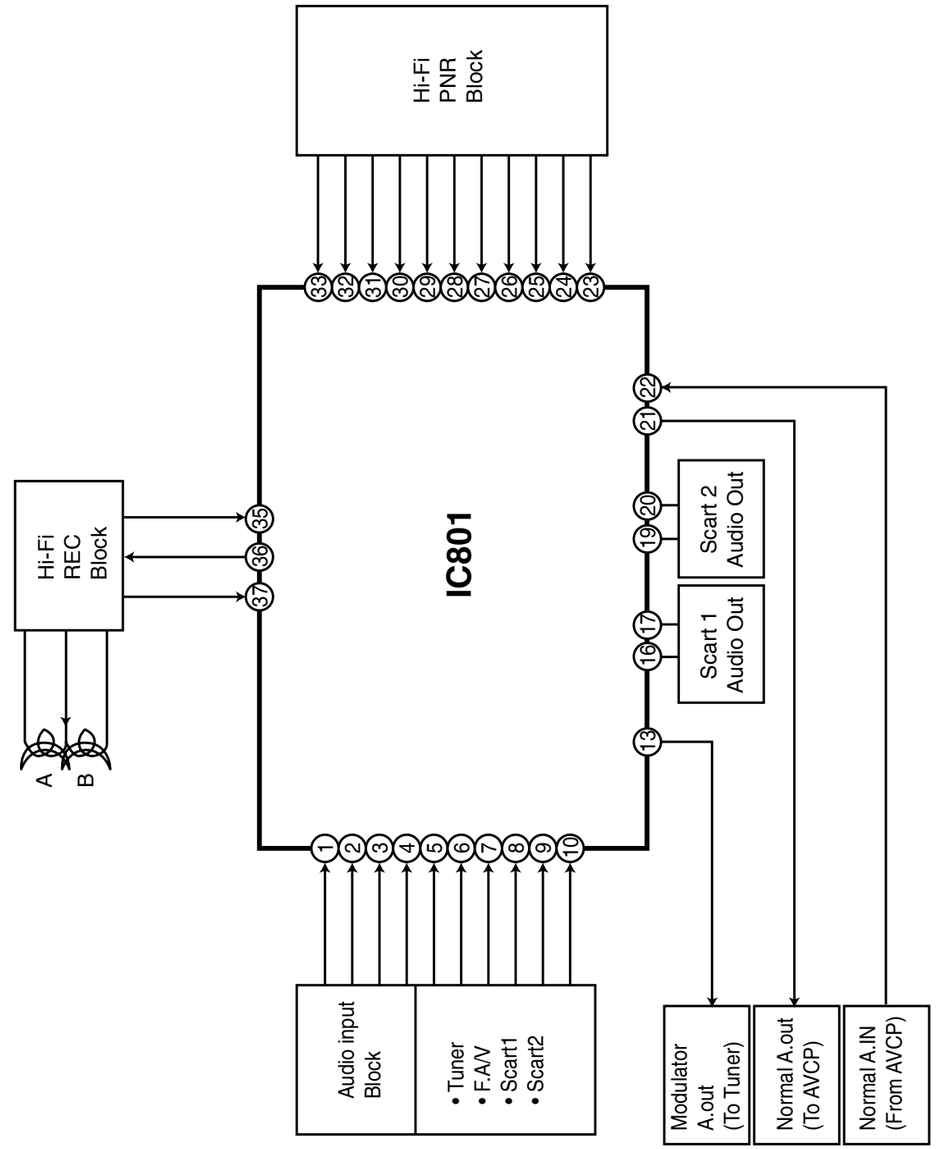
(PB MODE)



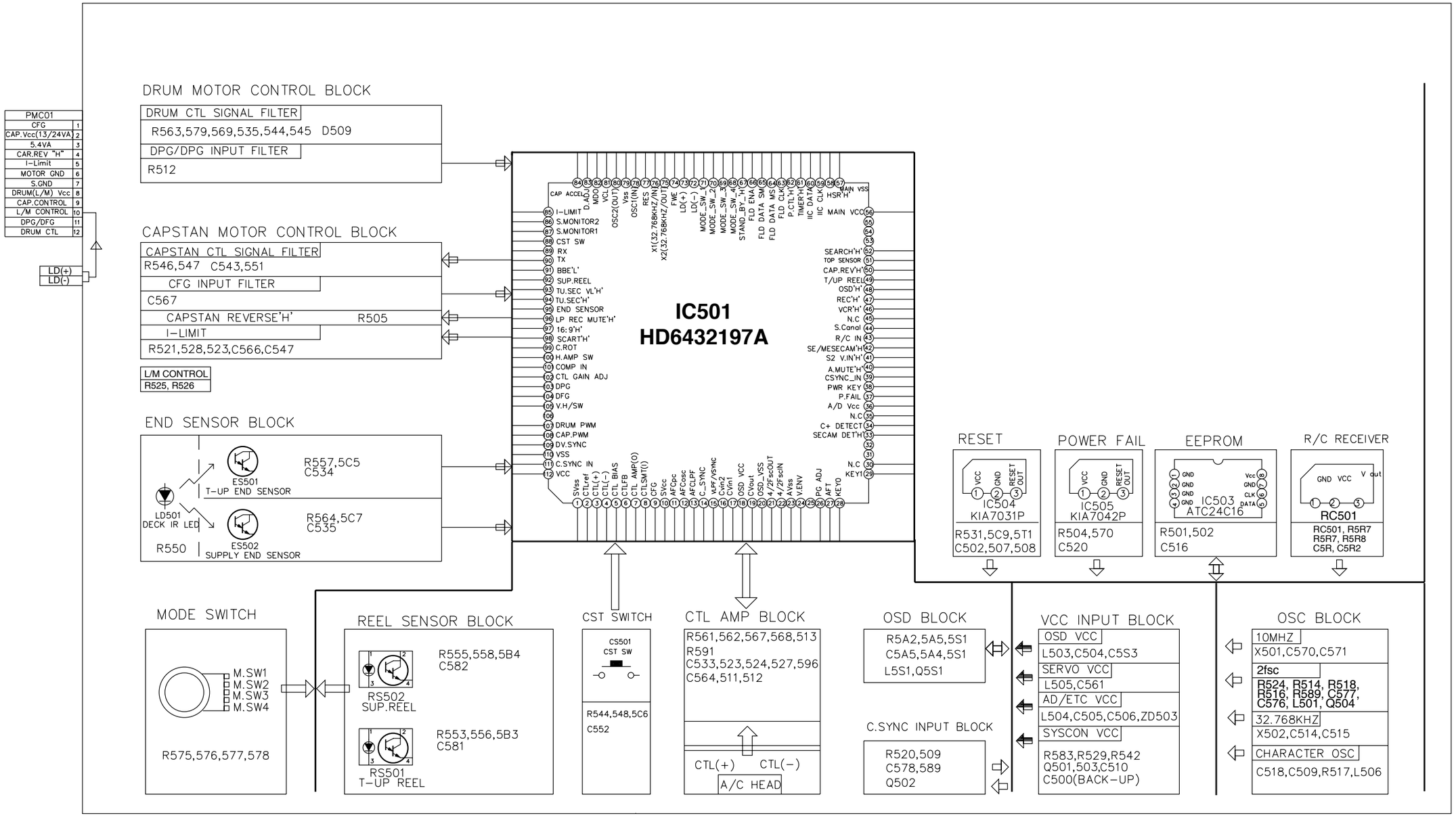
(REC MODE)



5. Hi-Fi Block Diagram(Hi-Fi Model Only)

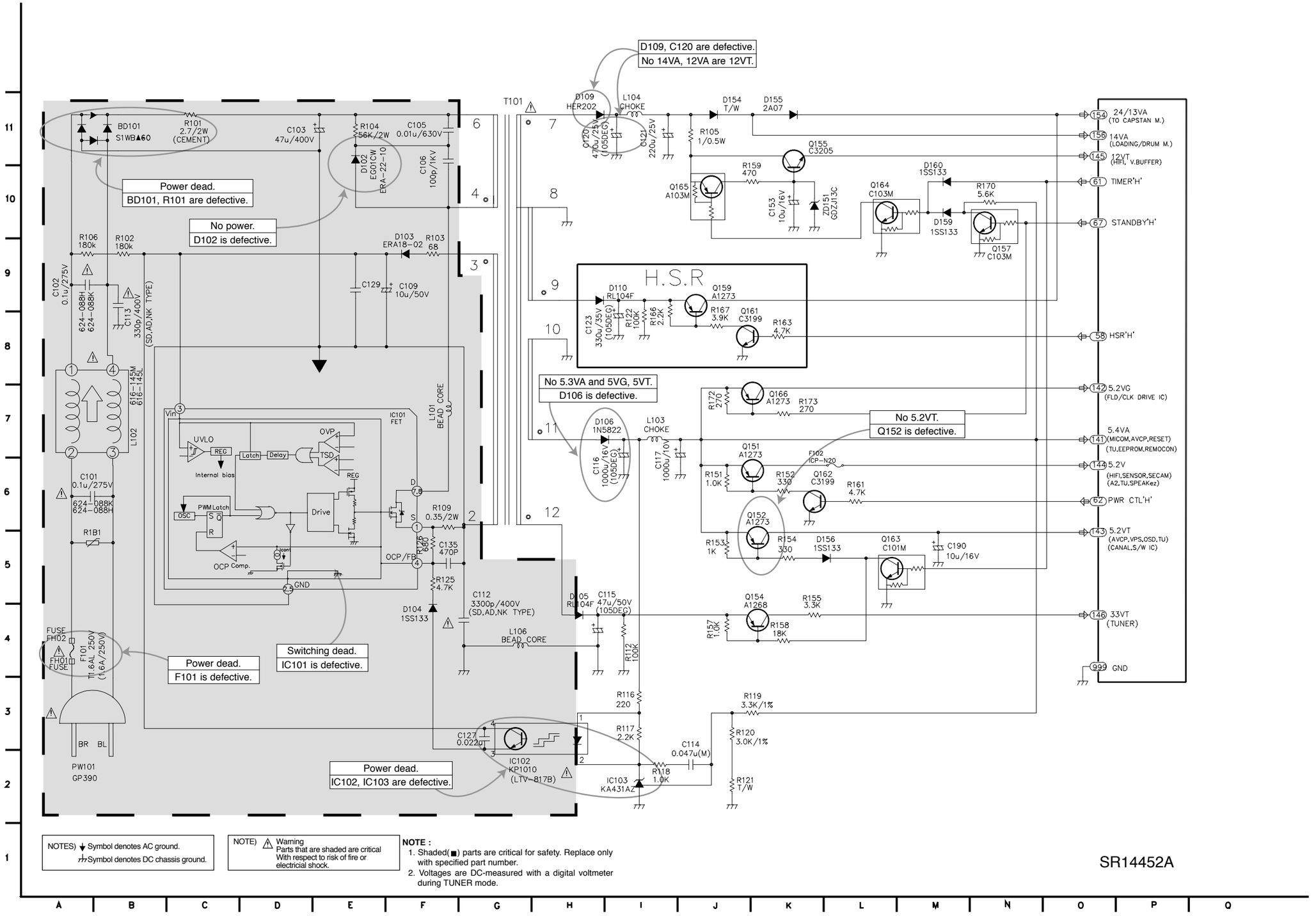


6. System Block Diagram



CIRCUIT DIAGRAMS

1. Power Circuit Diagram



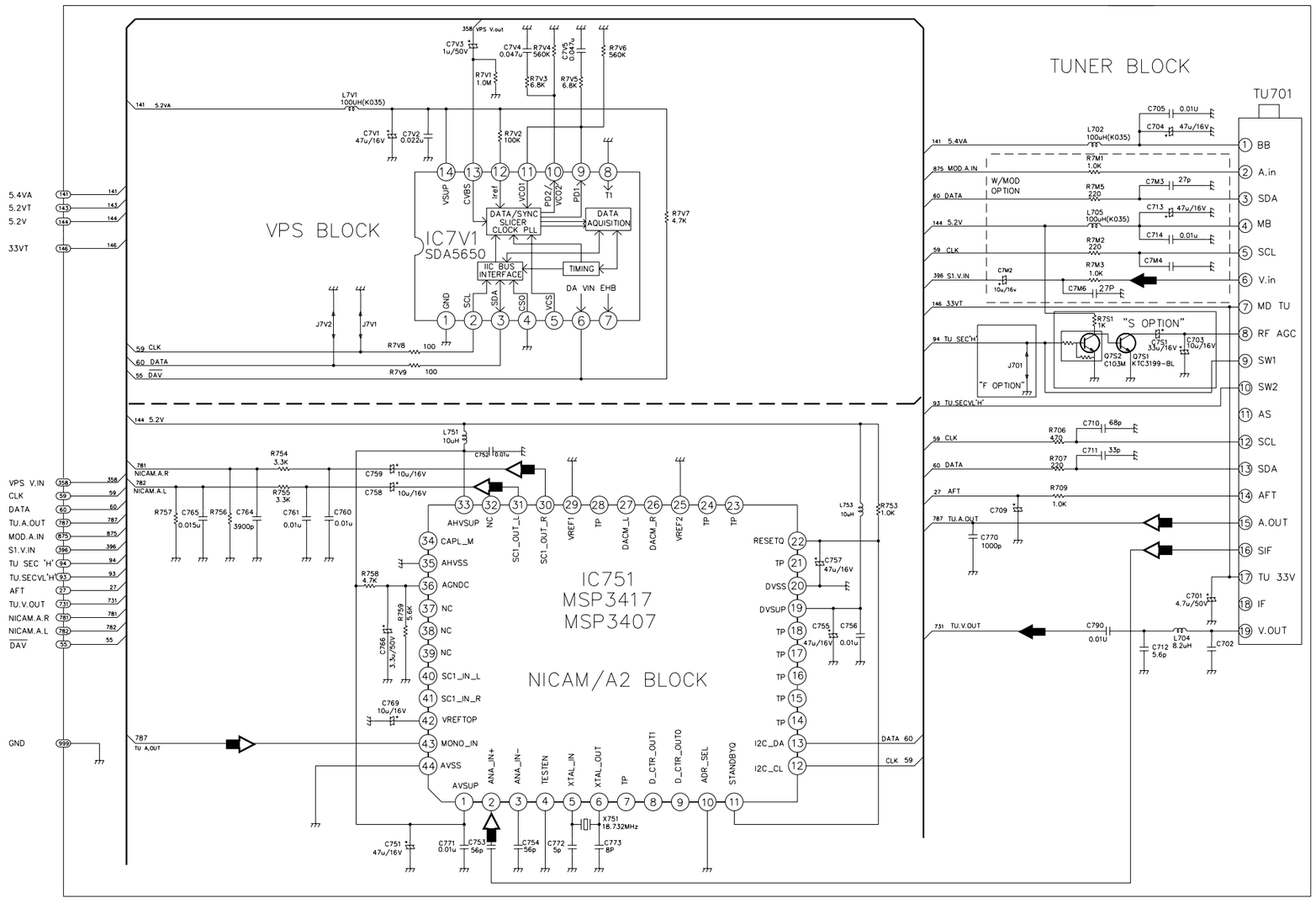
NOTES) ⏚ Symbol denotes AC ground.
⏚ Symbol denotes DC chassis ground.

NOTE) ⚠ Warning
Parts that are shaded are critical With respect to risk of fire or electricial shock.

NOTE :
1. Shaded(■) parts are critical for safety. Replace only with specified part number.
2. Voltages are DC-measured with a digital voltmeter during TUNER mode.

SR14452A

2. Tuner, NICAM Circuit Diagram

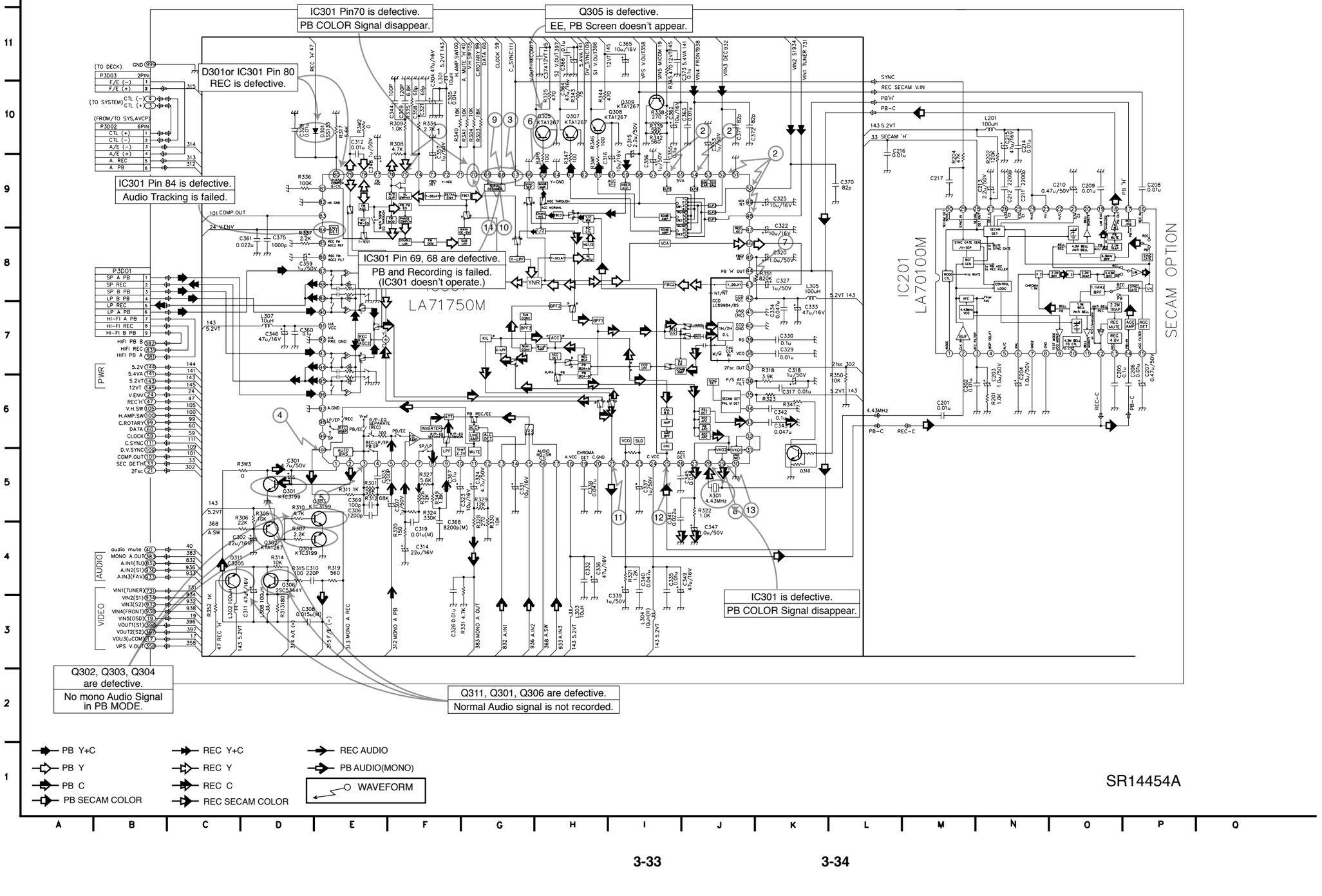


EE MODE(VIDEO)

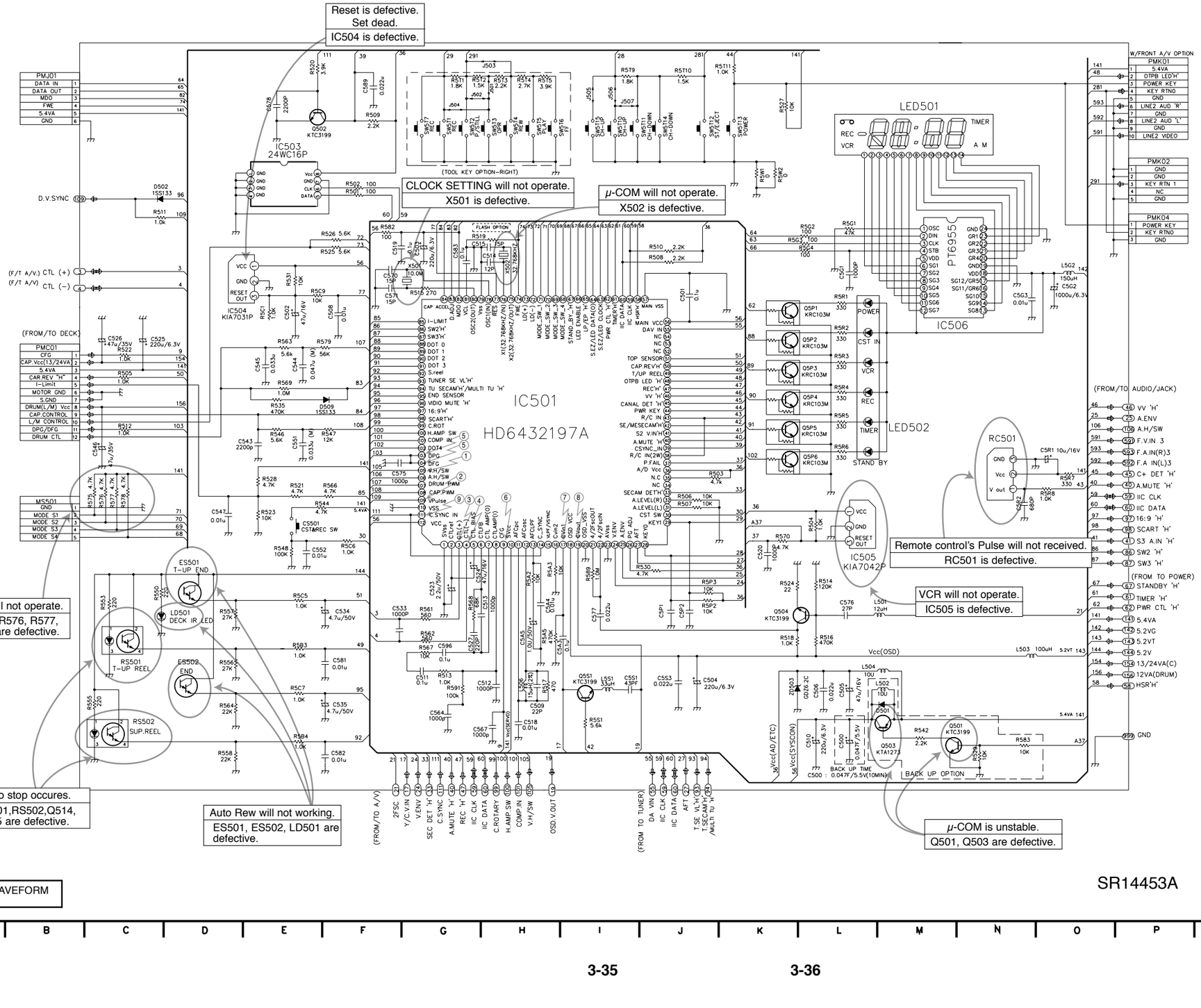
TU MODE (AUDIO)

SR14456A

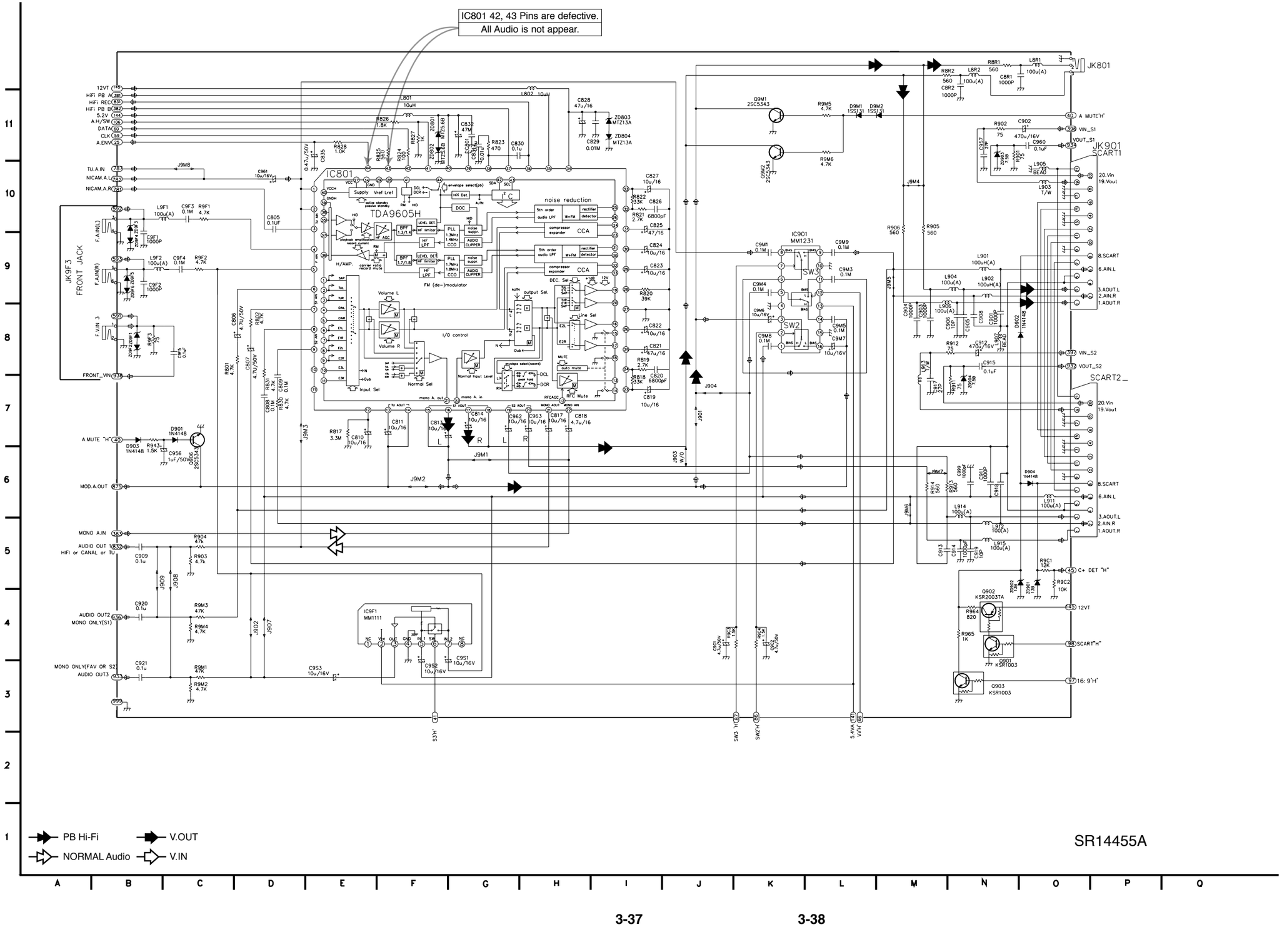
3. A/V, SECAM, VPS Circuit Diagram



4. System Circuit Diagram

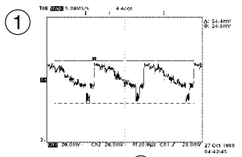


5. Hi-Fi, SCART Circuit Diagram

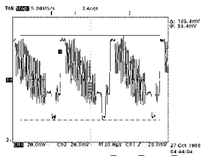


• WAVEFORM

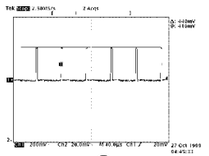
★ IC301 Oscilloscope Waveform

① 

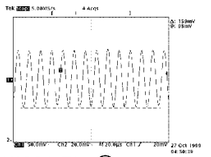
IC301 Pin ㉕
PB mode
500mvp-p

② 

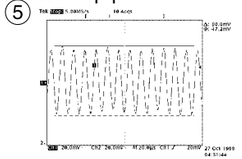
IC301 Pins ㊽,㊿, ㊿㊷
㊿㊹, ㊿㊻
Video in 1Vp-p

③ 

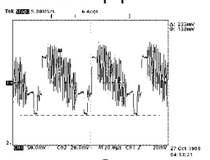
IC301 Pin ㊼
PB/REC mode
4.0Vp-p

④ 

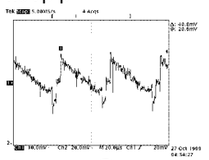
IC301 Pin ㊿㊿
REC mode
1.1Vp-p

⑤ 

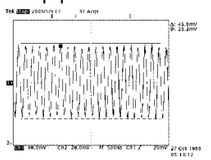
IC301 Pin ③
REC mode
2.0Vp-p

⑥ 

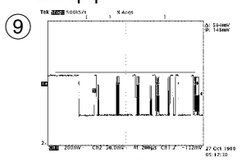
IC301 Pin ㊺
PB mode
2.02Vp-p

⑦ 

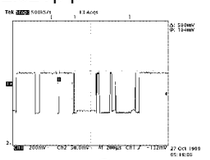
IC301 Pin ㊸
PB mode
400mVp-p

⑧ 

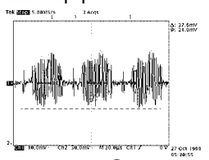
IC301 Pin ㉘
PB mode
400mVp-p

⑨ 

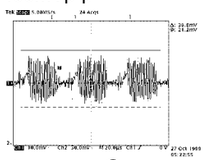
IC301 Pin ㊽㊽
PB/REC mode
5Vp-p

⑩ 

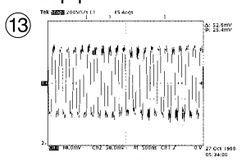
IC301 Pin ㊾
PB/REC mode
5Vp-p

⑪ 

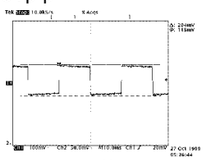
IC301 Pins ㉑
REC mode
340mVp-p

⑫ 

IC301 Pins ㉕
PB mode
300mVp-p

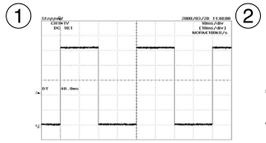
⑬ 

IC301 Pin ㉙
PB mode
400mVp-p

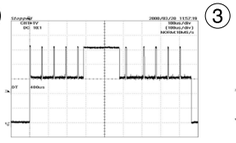
⑭ 

IC301 Pin ㎿
PB mode
3.6Vp-p

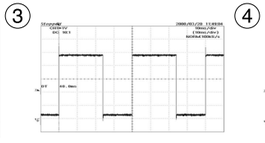
* IC501 Waveform Photographs

① 

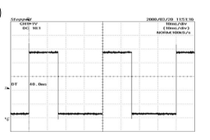
V.HSW
(IC501 Pin 105)
1V/10mS
REC/PB MODE

② 

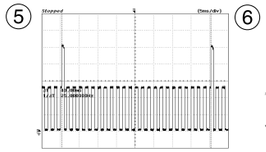
DV.SYNC
(IC501 PIN 109)
1V/100uS
QUE/REV MODE

③ 

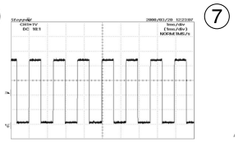
CTL(+)
(IC501 Pin 3)
1V/10mS

④ 

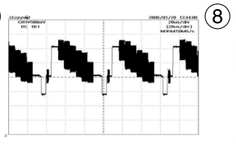
CTL(-)
(IC501 Pin4)
1V/10mS

⑤ 

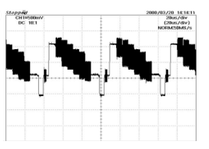
DFG/FG
(IC501 PIN 103,104)
1V/10mS
REC/PB MODE

⑥ 

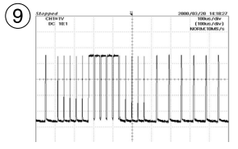
CFG
(IC501 Pin9)
1V/10mS

⑦ 

V.IN
(IC501 Pin 17)
500mV/20uS

⑧ 

V.OUT
(IC501 Pin 19)
500mV/20uS
EE/PB MODE

⑨ 

C.SYNC
(IC501 Pin 111)
1.0V/100uS
EE/PB MODE

• CIRCUIT VOLTAGE CHART

MODE / PIN NO.	EE	PB	REC
IC103			
R	2.45	2.45	2.44
A	-0.03	-0.03	0
K	4.05	4.06	4.07
IC201			
1	2.52	2.52	2.52
2	2.4	2.41	2.41
3	0	3.35	3.37
4	0	2.59	0
5	0	0	0
6	2.8	3.72	0
7	0	0	0
8	0	0	0
9	3.04	3.02	3.04
10	2.53	2.51	0
11	2.1	2.08	2.19
12	3.32	1.96	3.25
13	4.01	4.01	4.01
14	2.55	2.54	2.56
15	3.06	1.94	3.06
16	6.2	3.2	3.22
17	2.34	4.25	0.22
18	0.13	3.44	0.13
19	2.23	2.21	2.22
20	2.08	2.22	2.06
21	2.27	2.4	2.28
22	1.42	1.43	0
23	5.05	5.02	5.06
24	5.05	5.02	5.06
25	2.31	2.07	2.37
26	2.3	2.02	2.38
27	2.09	2.08	2.11
28	0.18	0.19	0.18
29	0.48	0.26	0.41
30	2.08	2.07	2.11
IC401			
1	0	0.01	0
2	5.21	5.2	5.21
3	2.19	2.2	2.19
4	0	0	0
5	2.91	2.91	2.91
6	0	0	0
7	2.92	2.92	2.92
8	0	0	0
IC402			
1	0	0	0
2	2.86	2.86	2.85
3	5.15	5.16	0
4	5.29	5.29	5.29
5	4.94	4.94	4.94
6	5.29	5.29	5.29
7	5.29	5.2	5.29
8	2.57	2.57	2.57
9	0	0	0
10	5.29	5.29	5.29

MODE / PIN NO.	EE	PB	REC
11	2.41	2.41	2.42
12	2.1	2.1	2.08
13	0	5..29	5.29
14	5.26	5.26	5.25
15	0	0	0
16	0	0	0
17	0	0	0
18	0	0	0
IC301			
1	5.15	5.14	1.7
2	0.02	0.03	0.75
3	2.29	2.29	0
4		1.46	0.5
5	2.28	2.26	2.47
6	2.29	2.28	2.29
7	2.28	2.28	2.27
8	2.27	2.27	2.27
9	2.26	2.26	3.05
10	2.29	2.29	2.28
11	2.37	2.39	2.28
12	0	0.02	0.11
13	2.26	2.3	2.28
14		0.02	
15	2.26	2.26	2.29
16	5.17	0.16	5.05
17	2.26	2.26	2.27
18	5.17	5.17	5.14
19	4.24	4.25	3.07
20	0	0	0
21	3.36	1.96	3.25
22	3.07	3.06	3.06
23	3.06	3.03	3.05
24	5.16	5.16	5.13
25	0.13	3.44	5.13
26	1.44	1.82	0
27	2.07	2.1	1.42
28	4.23	4.21	4.18
29	2.83	2.83	2.9
30	0	0	0
31	4.7	4.7	4.69
32	4.7	4.7	4.69
33	2.85	2.06	2.07
34	0.33	0.31	0.31
35	2.17	2.16	2.16
36	3.35	3.35	3.35
37	2.09	2.11	2.09
38	1.99	2.03	2.02
39	9.45	9.43	9.39
40	0	0	0
41	0	0	0
42	5.17	5.16	5.14
43	2.4	2.42	2.39
44	2.34	4.42	0.08
45	2.33	2.46	2.46
46	2.69	2.67	2.68

MODE / PIN NO.	EE	PB	REC
47	4.17	4.17	4.17
48	2.35	2.37	2.33
49	3.18	3.18	3.18
50	1.97	1.97	1.97
51	0	0	0
52	1.97	1.97	1.97
53	2.34	2.35	2.35
54	1.97	1.99	1.99
55	5.24	5.24	5.24
56	2.25	2.31	2.29
57	2.02	2.14	1.99
58	2.37		2.4
59	2.94	2.95	2.93
60	1.42	1.55	1.38
61	1.72	1.85	2.05
62	0.09	0.11	0.11
63	1.75	1.84	
64	0	0	0.
65	1.85	1.85	1.81
66	0	0	0
67	0.	0.44	0.4
68	4.79	4.91	4.81
69	4.75	4.81	4.79
70	5.27	2.69	2.69
71	0.01	0	0.01
72	5.13	5.11	5.09
73		1.98	2.21
74	2.55	2.63	2.53
75	2.46	2.63	2.45
76	2.47	0.77	2.45
77	1.59	1.59	1.49
78	2.7	3.39	2.69
79	2.02	1.91	2.52
80	1.06	1.06	4.72
81	1.11	1.12	1.11
82	0	0	0
83	5.13	1.47	1.51
84	0.46	2.43	1.75
85	0	0	1.36
86		0	2.03
87	0	0.72	0.7
88	0.71	0.72	0.7
89	0.71	0.72	0.7
90	0.71	0.72	0.7
91	5.17	5.16	5.11
92	0	0	0
93	1.95	1.93	0.73
94	1.95	1.93	0.72
95	1.95	1.93	0.72
96	1.95	1.93	4.33
97	0	0	0
98	2.29	2.29	2.4
99	0	2.29	2.4
100	2.29	2.29	2.53

MODE / PIN NO.	EE	PB	REC
IC501			
1	0	0	0
2	2.39	2.57	2.57
3	2.57	2.57	3.04
4	2.57	2.57	2.1
5	2.57	2.57	2.57
6	2.56	2.57	2.57
7	2.58	2.59	2.58
8	2.55	2.55	2.55
9	4.62	2.31	2.31
10	4.85	5.16	5.016
11	1.89	1.91	1.9
12	1.89	1.9	1.89
13	2.61	2.5	2.49
14	0.4	0.4	0.4
15	0.08	0.1	0.56
16	1.99	1.91	1.98
17	2.39	2.34	2.31
18	5.14	5.14	5.11
19	2.41	2.37	2.33
20	0	0	0
21	2.47	2.47	0
22	2.46	2.46	0
23	0	0	0
24	0.51	2.47	0.01
25	2.81	2.88	2.8
26	5.27	2.28	5.28
27	2.46	2.5	2.54
28	5.27	5.28	5.28
29	5.22	5.27	5.27
30	0	5.01	0.05
31	0.17		1.9
32	0.12		
33	0.18	0.18	0.18
34	0.31	0.3	0.43
35	5.27	5.28	5.28
36	5.28	5.29	5.28
37	4.93	4.94	4.94
38	4.88	4.88	4.87
39	2.29	2.29	2.28
40	0	0	0
41	0	0	0
42	0	0	0
43	4.88	4.88	4.87
44	5.24	5.25	5.24
45	0	0	0
46	0	0	0
47	0	0	0
48	0	0	0
49	0.01	5.28	
50	5.25	0	0
51	4.48	0.04	0.02
52	5.28	5.29	5.29
53	0	0	0
54	5.25	5.26	5.27

MODE / PIN NO.	EE	PB	REC
55	5.27	5.29	0.08
56	5.27	5.28	5.28
57	0	0	0
58	0	0	0
59	4.91	4.92	4.79
60	4.91	4.91	4.79
61	5.17	5.18	5.18
62	5.17	5.19	5.18
63	2.84	2.83	2.86
64	5.14	5.14	5.15
65	0.01	0.01	0.02
66	5.1	5.11	5.11
67	0.83	0.83	0.89
68	0.01	5.3	5.3
69	0.01	5.3	5.3
70	5.29	5.3	5.3
71	5.29	0	0.01
72	0.03	0.03	0.04
73	5.24	5.23	5.22
74	0	0	0
75	1.49	1.5	1.5
76	1.3	1.4	1.21
77	5.27	5.27	5.27
78	2.55	2.53	2.54
79	0	0	0
80	5.29	2.58	2.58
81	3.25	3.25	3.25
82	5.28	5.28	5.28
83	0	2.7	2.69
84	0	2.77	2.77
85	0	3.55	3.55
86	2.65	2.68	2.86
87	0	3.3	3.21
88	0	0	0
89	0	0	0
90	0	0	0
91	0	0	0
92	0.95	5.16	
93	0	0	0
94	0	0	0
95	0.29	0.1	0.07
96	0	0	0
97	0	0	0
98	5.26	5.26	5.25
99	0	2.7	0
100	0.01	0	0
101	0.7	0.13	0.57
102	0	0	0
103	0.12	1.39	1.39
104	0.12	1.39	1.39
105	0	2.7	0
106	0	2.64	5.12
107	0	2.75	2.74
108	0	2.78	2.77
109	0.05	0.05	0.05

MODE / PIN NO.	EE	PB	REC
110	0	0	0
111	4.2	0.4	0.4
112	5.29	5.28	5.27
IC503			
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	5.01	4.95	4.79
6	5.01	4.95	4.8
7	0	0	0
8	5.29	5.29	5.28
IC504			
1	5.28	5.28	5.28
2	0	0	0
3	5.28	5.28	5.28
IC505			
1	5.28	5.28	5.28
2	0	0	0
3	4.87	4.87	4.87
IC506			
1	2.22	2.12	2.14
2	5.16	5.15	2.15
3	2.85	2.86	2.85
4	5.11	5.11	5.11
5	4.58	4.38	4.44
6	1.78	2.15	1.41
7	2.11	2.14	2.58
8	2.64	2.62	2.6
9	1.95	2.04	1.51
10	1.52	1.62	1.52
11	1.96	2.27	1.41
12	1.96	1.79	1.95
13	0.61	0.59	0.64
14	1.41	1.38	1.43
15	0.53	0.48	0.53
16	0.53	0.48	0.54
17	1.14	1.13	1.13
18	4.49	4.41	4.47
19	0	0	0
20	1.13	1.15	1.2
21	1.14	1.13	1.21
22	1.12	1.13	1.2
23	1.24	1.25	1.35
24	0	0	0
IC7V1			
1	0	0	0
2	5.01	4.94	4.79
3	5.01	4.94	4.78
4	0	0	0
5	5.28	5.28	0.39
6	5.28	5.28	
7	0	0	2.66
8	0	0	0
9	0.01	0.01	2.31

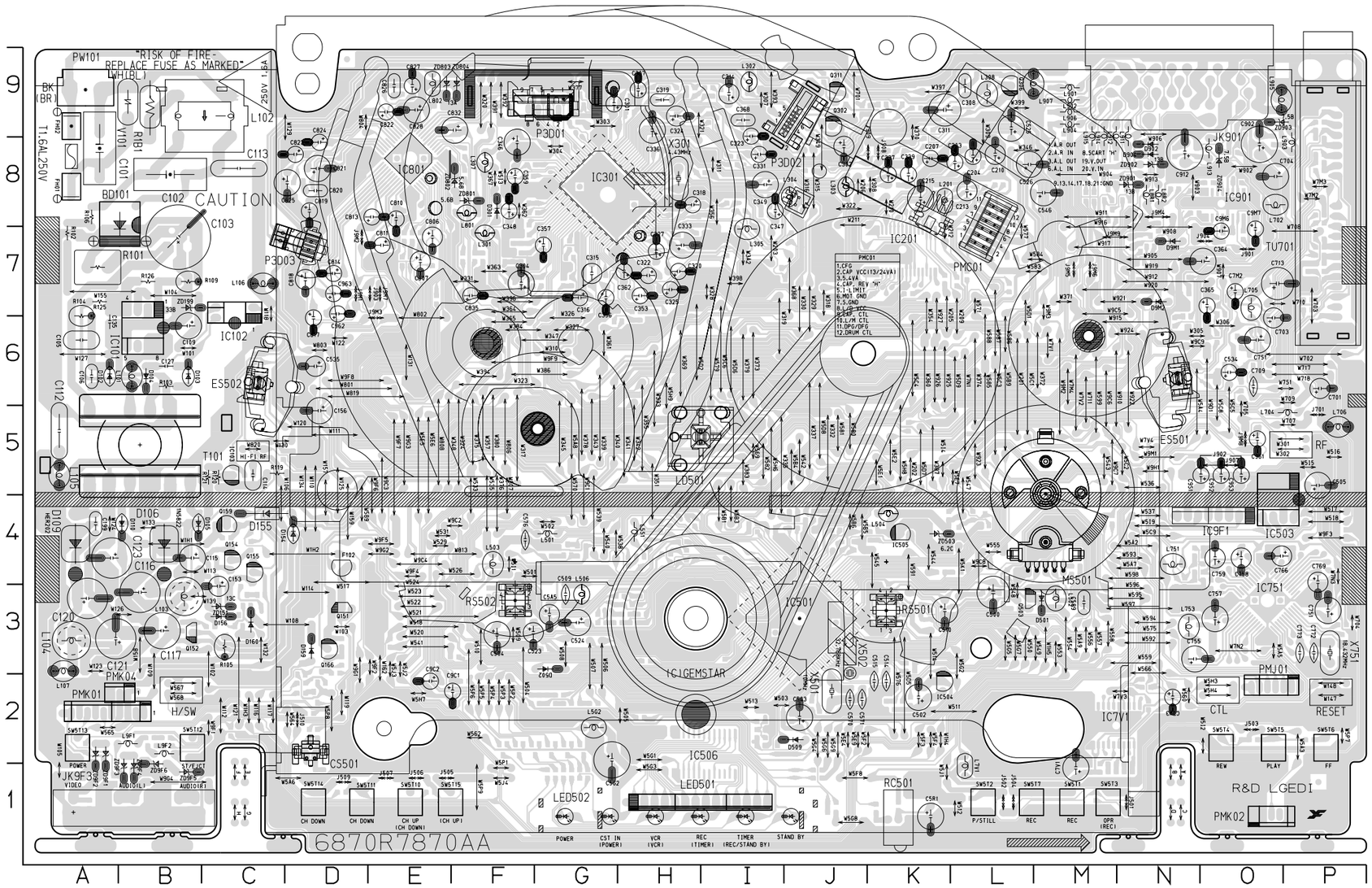
MODE / PIN NO.	EE	PB	REC
10	0	0	2.36
11	0.01	0	2.31
12	1.56	1.56	1.56
13	0.99	0.99	1.39
14	5.28	5.29	5.28
IC801			
1	2.84	2.91	2.7
2	2.92	2.91	2.81
3	2.91	2.9	2.81
4	2.82	2.81	2.68
5	2.8	2.86	2.67
6	2.8	2..86	2.66
7	2.79	2.85	2.65
8	2.78	2.85	2.65
9	2.79	2.84	2.66
10	2.79	2.84	2.66
11	2.77	2.83	2.65
12	2.76	2.82	2.64
13	2.71	2.75	2.59
14	2.49	2.51	2.33
15	2.48	2.51	2.32
16	2.64	2.67	2.49
17	2.64	2.68	2.5
18	1.48	2.57	2.32
19	2.63	2.67	2.5
20	2.6	2.63	2.5
21	2.57	2.59	2.47
22	2.66	2.86	2.55
23	2.63	2.64	2.51
24	2.5	2.5	2.39
25	2.52	2.53	2.4
26	2.36	2.37	2.27
27	0.01	0	0
28	2.51	2.47	2.41
29	2.6	2.57	2.46
30			
31	2.34	2.41	1.38
32	0.03	0.02	-0.07
33	0.03	0.04	-0.06
34	12.6	12.5	12.57
35	3.35	3.31	2.89
36	3.29	3.3	2.9
37	3.29	3.3	2.9
38	3.55	3.56	3.42
39	0	0	0.01
40	5.2	5.2	5.21
41	2.27	2.29	2.5
42	4.96	4.98	4.91
43	5.05	5.06	4.97
44	2.8	2.79	2.69
IC751			
1	5.14	5.15	5.15
2	1.51	1.51	1.51
3	1.51	1.51	1.51
4	0	0	0

MODE / PIN NO.	EE	PB	REC
5	2.47	2.48	2.48
6	2.47	2.48	2.48
7	0.54	0.5	0.46
8	0	0	0.45
9	0	0	0.45
10	0	0	0
11	5.16	5.16	5.16
12	4.91	4.86	4.79
13	4.9	4.8	4.79
14	2.58	0.51	0.57
15	2.58	0.5	0
16	2.41	0.51	0.57
17	0.53	0.53	0
18	0.54	0.51	0.58
19	5.13	5.14	5.14
20	0	0	0
21	0.53	0.51	0
22	5.16	5.16	5.16
23	0	0.02	0
24	0	0.02	0
25	0	0	0
26	0	0.05	0
27	0.05	0.05	0
28	0	0	0
29	0	0	2.8
30	2.8	2.8	2.8
31	2.79	2.79	2.79
32	0	0.02	0
33	5.16	5.14	5.15
34	4.2	4.2	4.21
35	0	0	0
36	2.8	2.8	2.8
37			0
38			0
39			0
40	2.84	2.84	2.79
41	2.85	2.83	2.79
42	2.59	2.59	2.59
43	2.31	2.31	2.3
44	3.3		0

Transistor	EE Mode			PB Mode			REC Mode		
	EE	PB	REC	EE	PB	REC	EE	PB	REC
Q151	4.55	5.3	5.24	5.34	4.54	5.24	5.3	4.55	5.24
Q152	5.31	4.52	5.22	5.31	4.52	5.22	5.3	4.51	5.22
Q154	32.99	32.34	32.97	33.53	32.89	33.5	33.76	33.12	33.72
Q155	12.73	13.4	14.05	12.68	13.35	13.77	12.76	13.42	13.98
Q157	0.03	0.84	4.38	0.03	0.84	4.38	-0.03	0.84	4.38
Q159	29.84	29.78	13.21	29.79	29.8	12.48	30.14	30.13	12.73
Q161	0.03	0	29.82	0.03	0	29.8	-0.03	0	30.11
Q162	0.02	0.69	0	-0.02	0.69	0	-0.02	0.69	0
Q163	0.03	5.18	0.03	0.03	5.18	0.03	-0.03	5.18	0.03
Q164	-0.03	4.38	-0.01	-0.03	4.38	-0.01	-0.03	4.38	0
Q165	14.06	-0.01	14.04	13.74	-0.01	13.71	13.95	-0.01	13.95
Q166	4.4	5.3	5.11	5.3	4.41	5.13	5.3	4.4	5.1
Q301	0	0.01	5.15	0	0	5.15	0	0.75	1.69
Q302	5.18	5.18	-0.42	5.18	4.52	5.12	5.14	5.13	-24.71
Q303	0.01	-0.42	0	0	0.69	0.01	-18.22	-24.85	0.01
Q304	0.01	-0.4	0	0	0.71	0	-18.22	-24.7	0
Q305	2.01	1.29	0	2.53	1.83	0	2.5	1.81	0
Q306	5.14	5.19	5.19	5.19	5.16	5.19	1.9	2.14	4.89
Q307	2.69	1.98	0	2.69	1.98	0	2.64	1.93	0
Q308	2.66	1.98	0	2.63	1.96	0	2.6	1.93	0
Q309	3.09	2.41	0	3.05	2.37	0	3.01	2.33	0
Q501	0	0.67	0.01	0	0.67	0.01	0	0.67	0.01
Q502	0	0.71	0.01	0	0.22	2.33	0	0.23	2.29
Q503	5.3	4.61	5.28	5.3	4.61	5.28	5.3	4.61	5.28
Q504	0	0.14	2.69	0.05	0.63	2.65	0.05	0.67	2.67
Q5S1	0.43	0	1.61	2.22	0	2.53	1.92	0	2.5
Q514	0	5.09	0.01	0			0		
Q515	0	0	5.16	0			0		
Q906	0	0.12	1.93	0	0.07	2.37	0	0.13	2.4
Q901	0	5.26	0.01	0	5.25	0.01	0	5.25	0.01
Q7S1	0	0	1.32	0	0		0	0	0.98
Q902	12.73	0.01	12.73	12.66	0.01	12.66	12.72	0.01	12.71
Q903	0	0	12.72	0	0	12.64	0	0	12.71

PRINTED CIRCUIT BOARD DIAGRAMS

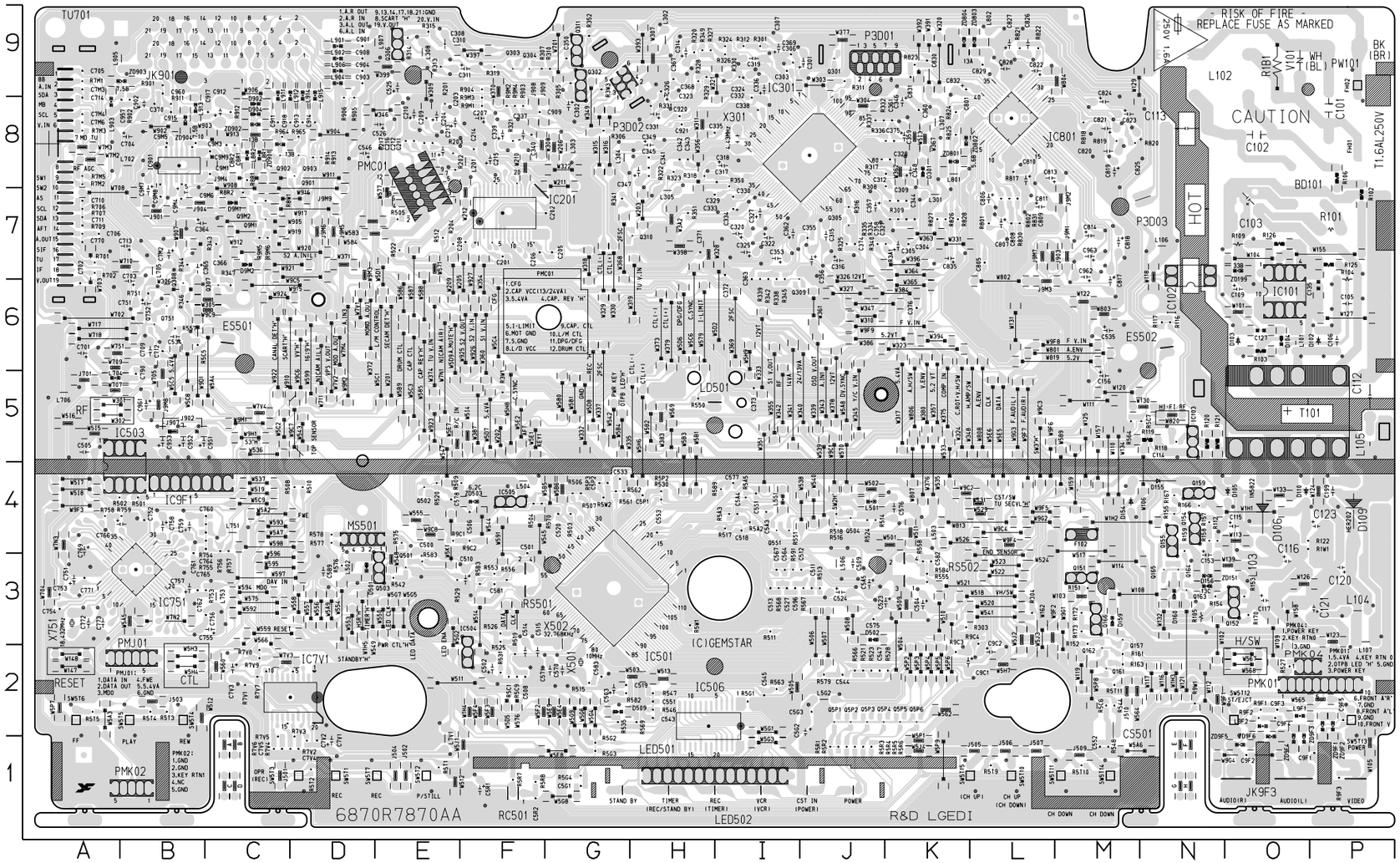
1. MAIN P.C.Board (TOP VIEW)



LOCATION GUIDE

BD101	B8	C504	F3	C9C2	E2	J9M9	M7	Q152	B3
C101	A8	C505	P5	C9M6	O7	JK901	O9	Q154	C4
C102	B8	C509	G3	C9M7	O7	JK9F3	A1	Q155	C4
C103	B7	C510	K3	C9S1	O5	L101	B6	Q159	C4
C105	A6	C514	K2	C9S2	O5	L102	C9	Q166	D3
C106	A6	C515	K2	C9S3	O5	L103	B3	Q302	J9
C109	B6	C523	F3	C5501	D2	L104	A3	Q306	L9
C112	A5	C524	G3	D102	A6	L105	A5	Q311	J9
C113	C8	C525	L9	D103	B6	L106	C7	Q503	L3
C114	C5	C526	L8	D104	B6	L107	A3	R101	A7
C115	B4	C534	O6	D105	B4	L201	K8	R102	A7
C116	B3	C535	D6	D106	B4	L301	F7	R103	B6
C117	B3	C546	M8	D109	A4	L302	I9	R104	A6
C120	A3	C570	J2	D110	B4	L303	J8	R105	C3
C121	A3	C571	J2	D154	D4	L304	J8	R106	A8
C123	A4	C576	F4	D155	C4	L305	I7	R109	B7
C127	B6	C589	M3	D156	C3	L307	F8	R119	C5
C135	A6	C5A5	G3	D159	D3	L308	L9	R120	C5
C153	C3	C5G2	G2	D160	C3	L501	G4	R121	C5
C156	D5	C5R1	K1	D301	F8	L502	M3	R125	A7
C199	A4	C701	P6	D501	M3	L503	F4	R126	B7
C203	L8	C703	O6	D502	G3	L504	K4	R1B1	B9
C204	L8	C704	O8	D509	J2	L506	G3	RC501	K1
C207	K8	C709	O6	D902	N8	L5G2	G2	RS501	K3
C210	L8	C713	O7	D904	N8	L5S1	H4	RS502	F3
C213	L8	C751	P3	D9M1	N7	L702	O8	SW5T1	M1
C215	K8	C755	N3	D9M2	N7	L704	P5	SW5T10	E1
C301	G9	C757	O3	ES501	N6	L705	O7	SW5T11	D1
C302	J8	C758	O4	ES502	C5	L706	P5	SW5T12	B2
C304	F7	C759	O4	F102	D4	L751	N4	SW5T13	A2
C307	H9	C766	O4	FH01	A8	L753	N3	SW5T14	D1
C308	L9	C769	P4	FH02	A9	L7V1	L1	SW5T15	E1
C311	K9	C772	P3	IC101	B7	L801	F8	SW5T2	L1
C314	I9	C773	P3	IC102	C6	L802	E9	SW5T3	M1
C315	G7	C7M2	O7	IC103	C5	L8R1	N8	SW5T4	O2
C316	G7	C7S1	O6	IC503	P5	L8R2	N8	SW5T5	O2
C318	H8	C7V1	M1	IC504	K2	L901	M9	SW5T6	P2
C319	H9	C7V3	N2	IC505	K4	L902	M9	SW5T7	L1
C320	H7	C806	E7	IC9F1	O4	L903	P8	T101	B5
C322	H7	C807	E7	J501	N1	L904	M9	TU701	P9
C323	I9	C810	E8	J502	L1	L905	O9	V101	B9
C324	H9	C811	E7	J503	O2	L906	M9	X301	H8
C325	H7	C813	E8	J504	L1	L907	L9	X501	J2
C327	H7	C814	D7	J505	E1	L911	N9	X502	J3
C331	I8	C817	D6	J506	E1	L912	M9	X751	P3
C333	H7	C818	D7	J507	E1	L913	O8	ZD151	C3
C336	H9	C819	D8	J509	D1	L914	M9	ZD199	B7
C337	K8	C820	D8	J510	D2	L915	M9	ZD503	K4
C339	K8	C821	D8	J701	P5	L9F1	B2	ZD801	F8
C346	F8	C822	E9	J901	O7	L9F2	B2	ZD802	F8
C347	I8	C823	D8	J902	O5	LD501	I5	ZD803	E9
C348	F8	C824	D8	J903	E7	LED501	H1	ZD804	F9
C349	I8	C825	D8	J904	O7	LED502	G1	ZD901	N8
C353	H7	C826	E9	J907	O5	M5501	M5	ZD902	N8
C356	G7	C827	E9	J908	K8	P3D01	G9	ZD903	O9
C357	G7	C828	E9	J909	K8	P3D02	J9	ZD904	O8
C359	F8	C832	F9	J9M1	D7	P3D03	C7	ZD9F1	A2
C362	H7	C835	F7	J9M2	D7	PMC01	L8	ZD9F2	A2
C364	O7	C902	O8	J9M3	E6	PMJ01	P2	ZD9F3	B1
C365	O7	C912	N8	J9M4	N8	PMK01	B2	ZD9F4	B1
C368	I9	C961	O5	J9M5	M7	PMK02	O1	ZD9F5	B1
C500	L3	C962	D7	J9M6	M7	PMK04	B2	ZD9F6	B1
C502	K2	C963	D7	J9M7	E7	PW101	A9		
C503	J2	C9C1	F2	J9M8	O5	Q151	D3		

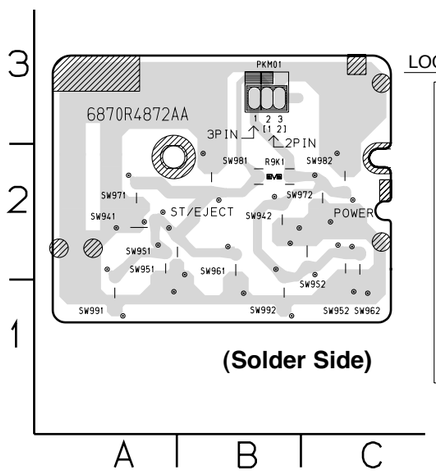
2. MAIN P.C.Board (BOTTOM VIEW)



LOCATION GUIDE

C201	F7	C544	J2	C909	F8	R112	N4	R339	I6	R563	I2	R758	A4
C202	G7	C545	I2	C911	C8	R116	N6	R340	J7	R564	M5	R759	B4
C205	G7	C547	J2	C913	D8	R117	N5	R341	G7	R566	J2	R7M1	A9
C206	F7	C551	H2	C914	D8	R118	N5	R342	I6	R567	J3	R7M2	A8
C208	F7	C552	M1	C915	B8	R122	O4	R343	C7	R568	I3	R7M3	A8
C209	E8	C564	I3	C917	C8	R151	M3	R344	B7	R569	H2	R7M5	A8
C211	E8	C567	I3	C918	D8	R152	M3	R345	I6	R570	F4	R7S1	B6
C212	E8	C575	J3	C920	H8	R153	O3	R346	B6	R575	E4	R7V1	C2
C214	F8	C577	I4	C921	H8	R154	N3	R347	C6	R576	D3	R7V2	D1
C216	E8	C578	E4	C957	B8	R155	N4	R349	H9	R577	D4	R7V3	D1
C217	E8	C581	F3	C960	B9	R157	N4	R350	I8	R578	D4	R7V4	D1
C303	I9	C582	K3	C9F1	P1	R158	N4	R351	H7	R579	J2	R7V5	C1
C305	K7	C583	G2	C9F2	O1	R159	N4	R352	G9	R582	G2	R7V6	C1
C306	I9	C596	I3	C9F3	O2	R161	M2	R3A1	K7	R583	E3	R7V7	C2
C309	K7	C5A3	I4	C9F4	O2	R163	M2	R3W1	F5	R589	I4	R7V8	C2
C310	E9	C5A4	I4	C9F5	P2	R166	N4	R3W3	G9	R591	I3	R7V9	C2
C312	K8	C5G1	G1	C9M1	C8	R167	N4	R501	B4	R5A2	I4	R801	L7
C317	I8	C5G3	J2	C9M3	B8	R170	O3	R502	A4	R5A3	I4	R802	L7
C321	K7	C5P1	H4	C9M4	B7	R172	M3	R503	G4	R5A5	I4	R817	L8
C326	H9	C5P2	G4	C9M5	B8	R173	M3	R504	F4	R5B3	F3	R818	M8
C328	K8	C5R2	F1	C9M8	B7	R1W1	O4	R505	E7	R5B4	K3	R819	M8
C329	I7	C5S1	I4	C9M9	C8	R201	E8	R506	G4	R5C1	F2	R820	M8
C330	I7	C5S3	H4	IC201	F7	R202	E8	R507	G4	R5C5	B6	R821	L9
C332	I8	C702	A6	IC301	J8	R203	E8	R508	D4	R5C6	M2	R822	L9
C334	I7	C705	A9	IC501	G3	R204	E7	R509	F4	R5C7	N5	R823	K9
C335	I8	C706	A7	IC506	H2	R301	I9	R510	D4	R5C9	F2	R824	K8
C338	I8	C710	A7	IC751	B3	R303	K3	R511	I3	R5G1	I2	R825	K8
C340	F8	C711	A7	IC7V1	D2	R304	L3	R512	E7	R5G2	G1	R826	K7
C341	H8	C712	B6	IC801	L8	R305	G9	R513	J3	R5G3	G1	R827	K7
C342	H8	C714	A8	IC901	B8	R306	G8	R514	J4	R5G4	G1	R828	K7
C343	H8	C752	B4	Q157	M3	R307	F9	R515	G2	R5P2	H4	R830	L7
C344	K7	C753	A3	Q161	M2	R308	K8	R516	J4	R5P3	G4	R831	L7
C345	H8	C754	A3	Q162	M2	R309	K7	R517	I4	R5R1	J1	R8R1	C8
C350	G9	C756	C3	Q163	N3	R310	G9	R518	J4	R5R2	J1	R8R2	C7
C355	J7	C760	C4	Q164	N3	R311	J9	R519	F2	R5R3	J1	R8W1	C7
C358	K7	C761	B3	Q165	N3	R312	I9	R520	E4	R5R4	J1	R901	B9
C360	K8	C762	B3	Q301	J9	R313	E9	R521	J2	R5R5	J1	R902	B8
C361	K8	C764	C4	Q303	F9	R314	E9	R522	E7	R5R6	J1	R903	F8
C363	I6	C765	C4	Q304	F9	R315	E9	R523	J2	R5R7	F1	R904	F9
C366	C7	C770	A7	Q305	J7	R316	J7	R524	J4	R5R8	F1	R905	D8
C367	H9	C771	A3	Q307	C6	R317	J8	R525	F3	R5S1	I4	R906	D8
C369	I9	C790	B5	Q308	B6	R318	H8	R526	F3	R5T1	E1	R911	B8
C370	B8	C7M3	A9	Q309	I6	R319	F9	R527	O2	R5T10	M1	R912	C8
C371	H7	C7M4	A8	Q310	H7	R320	H9	R528	K2	R5T11	M2	R913	D8
C372	I7	C7M6	A8	Q501	E3	R321	F8	R529	E3	R5T2	D1	R914	D8
C373	I5	C7V2	D1	Q502	E4	R322	H8	R530	H4	R5T3	B2	R964	C8
C374	J7	C7V4	D1	Q504	J4	R323	H8	R531	F2	R5T4	B2	R965	D8
C375	K8	C7V5	C1	Q5P1	J2	R324	I9	R535	G2	R5T5	A2	R9C1	E4
C376	K6	C801	K9	Q5P2	J2	R325	J7	R542	E3	R5T9	L1	R9C2	F4
C501	F3	C805	L7	Q5P3	J2	R326	I9	R544	M2	R5W1	H3	R9C3	K2
C506	F4	C808	L7	Q5P4	J2	R327	H9	R546	H2	R5W2	G4	R9C4	L3
C508	F2	C809	L7	Q5P5	K2	R328	H9	R547	H2	R701	A7	R9F1	O2
C511	J3	C829	L9	Q5P6	K2	R329	H9	R548	M1	R702	A7	R9F2	O2
C512	J3	C830	K9	Q5S1	I4	R330	I9	R550	H5	R706	A7	R9F3	P1
C513	I3	C831	K9	Q7S1	B6	R331	H8	R553	F3	R707	A7	R9M1	F8
C518	I4	C8R1	C8	Q7S2	B6	R332	J8	R555	K3	R709	A7	R9M2	F8
C519	G2	C8R2	C8	Q901	D8	R334	K7	R556	F3	R753	C3	R9M3	F8
C520	G4	C901	D9	Q902	C8	R335	K7	R557	B6	R754	C4	R9M4	F8
C527	I3	C903	D9	Q903	D8	R336	K8	R558	K3	R755	C4	R9M5	C7
C533	G4	C904	D9	Q9M1	C7	R337	J8	R561	G4	R756	C4	R9M6	C7
C543	H2	C908	D9	Q9M2	C7	R338	I6	R562	G4	R757	C4	R9W1	N2

3. KEY (LEFT) P.C.Board



(Solder Side)

LOCATION GUIDE

PKM01	B3
R9K1	B2
SW941	A2
SW942	B2
SW951	A2
SW952	C2
SW961	B2
SW962	C2
SW971	A2
SW972	C2
SW981	B2
SW982	C2
SW991	A1
SW992	B1
SW951	A2
SW952	C2

MEMO

MEMO

SECTION 4 MECHANISM (D-37)

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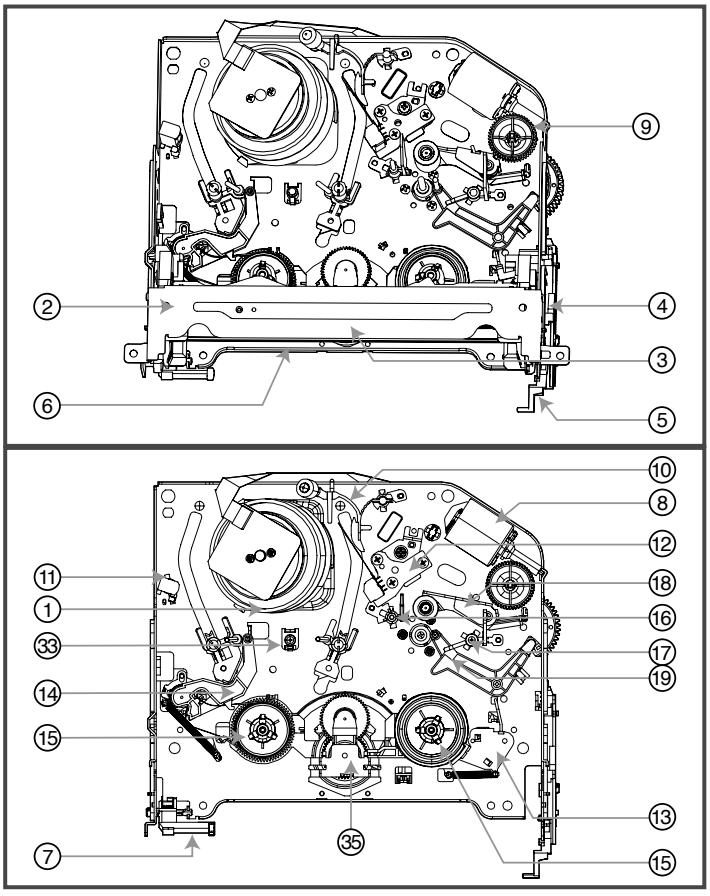
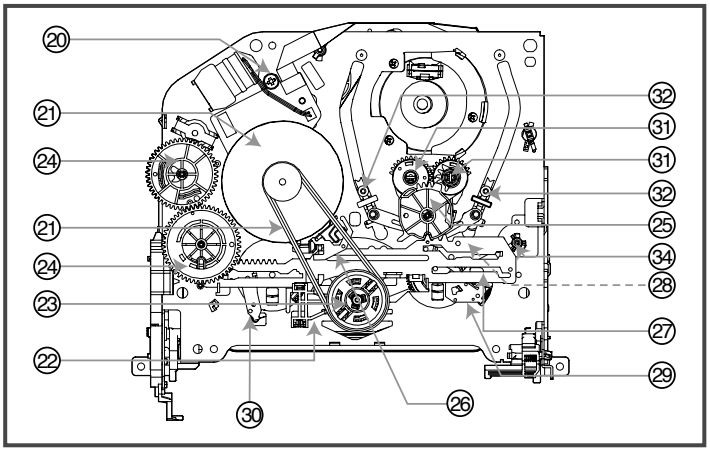
POSITION DRAWING OF DECK MECHANISM PARTS

• Top View



• Bottom View



NOTE : Assembly order is a reverse of disassembly order.

(1) For assembly, check the assembly mode is accurate.
(2) Parts firstly disassembled indicate parts firstly disassembled in disassembly of related parts.

Order Of Disassembled / Parts firstly Disassembled		Part	Fixing Type	Ref. Drawings	Position
	1	Drum Assembly	3 screws	A-1	T
	2	Plate Top	2 hooks	A-2	T
2	3	Holder Assembly CST	6 chasses	A-2	T
2,3	4	Gear Assembly Rack F/L	1 hook	A-2	T
2,3,4	5	Opener Door	Chassis Hole	A-2	T
2,3,4,5	6	Arm Assembly F/L	Chassis Hole	A-2	T
	7	Lever Assembly S/W	Chassis Hole, 1 hook	A-2	T
	8	Motor Assembly L/D	1 screw	A-3	T
	9	Gear Wheel	2 hooks	A-3	T
	10	Arm Assembly Cleaner	Chassis Embossing	A-3	T
	11	Head F/E	Chassis Embossing	A-3	T
	12	Base Assembly A/C Head	1 screw	A-3	T
2,3	13	Brake Assembly T	1 hook	A-4	T
2,3	14	Arm Assembly Tension	1 hook	A-4	T
2,3,13,14	15	Reel S / Reel T	Shaft	A-4	T
	16	Base Assembly P4	Chassis Embossing	A-5	T
	17	Opener Lid	Chassis Embossing	A-5	T
17	18	Arm Assembly Pinch	Shaft	A-5	T
17	19	Arm T/up	1 hook	A-5	T
	20	Supporter, capstan	Chassis Hole	A-6	B
17,18	21	Belt Capstan/Motor Capstan	3 screws	A-6	B
	22	Lever F/R	Locking Tab	A-6	B
21, 22	23	Clutch Assembly D37	Washer	A-6	B
	24	Gear Drive/Gear Cam	Washer/Hook	A-7	B
	25	Gear Sector	Hook	A-7	B
21	26	Brake Assembly Capstan	Chassis Hole	A-7	B
21,22,23, 24,2526	27	Plate Slider	Chassis Guide	A-7	B
21,22,23, 24,2526,27	28	Lever Tension	1 Hook	A7	B
21,22,23, 24,2526,27	29	Lever Spring	1 Hook	A-7	B
21,22,23, 24,2526,27	30	Lever Brake	1 Hook	A-7	B
25	31	Gear Assembly P2/ Gear Assembly P3	Bass	A-8	B
2, 3, 14, 25, 31	32	Base Assembly P2 /Base Assembly P3	6 Chasses	A-8	B
25, 31	33	Base Loading	3 Hooks	A-8	B
2,3,14	34	Base Tension	Chassis Embossing	A-9	T
	35	Arm Assembly Idler Jog	Locking Tab	A-9	T

T:Top, B:Bottom

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

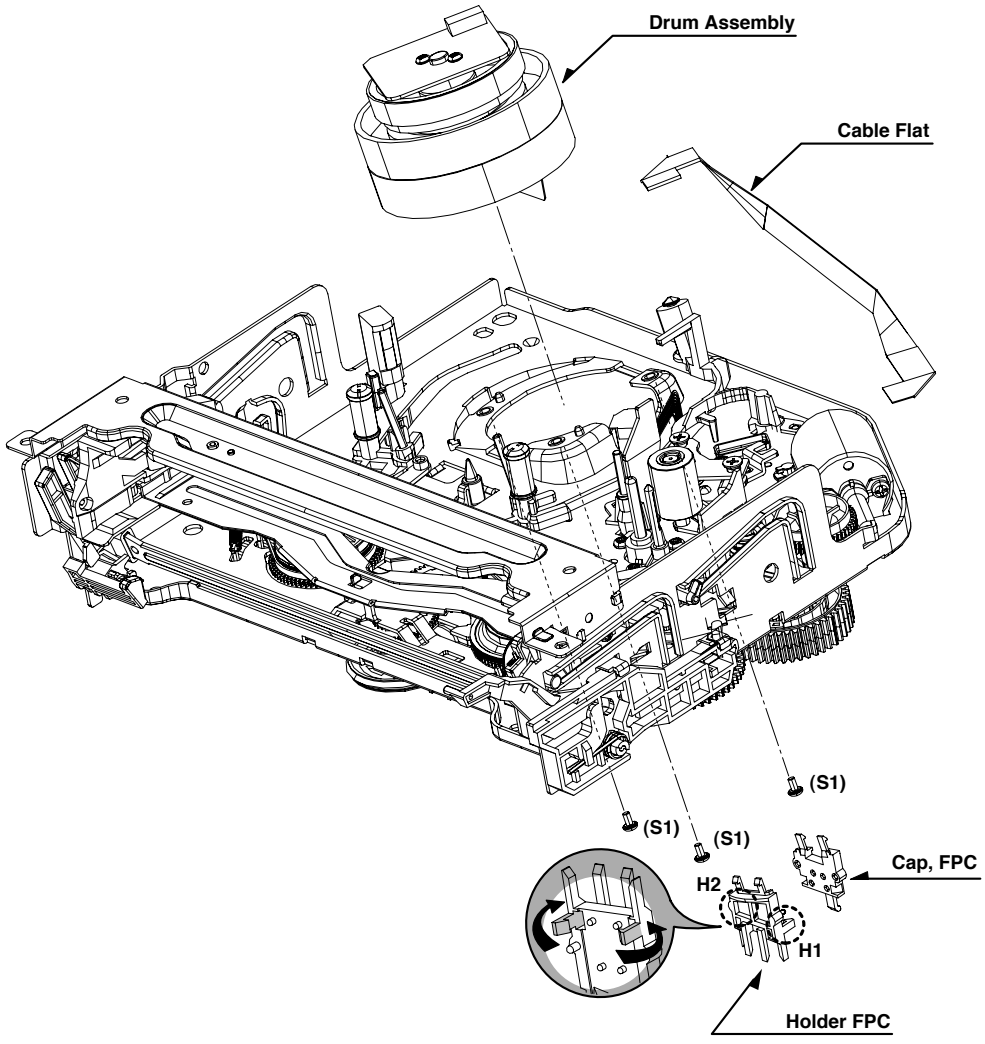
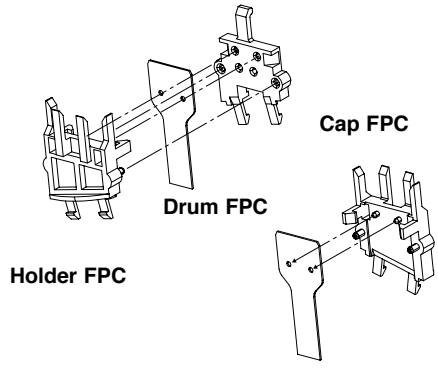


Fig. A-1

1. Disassembly of Drum Assembly (Figure A-1)

1) Separate cable flat from the Drum FPC and the Capstan Motor.
2) Release 3 screws (S1) on the bottom side of the chassis, and separate the drum assembly.
3) Release the hooks (H1, H2) and separate both the holder FPC and the Cap FPC (disassemble if necessary).

Cautions in assembly of FPC



Assembly shape seen in the reverse direction

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

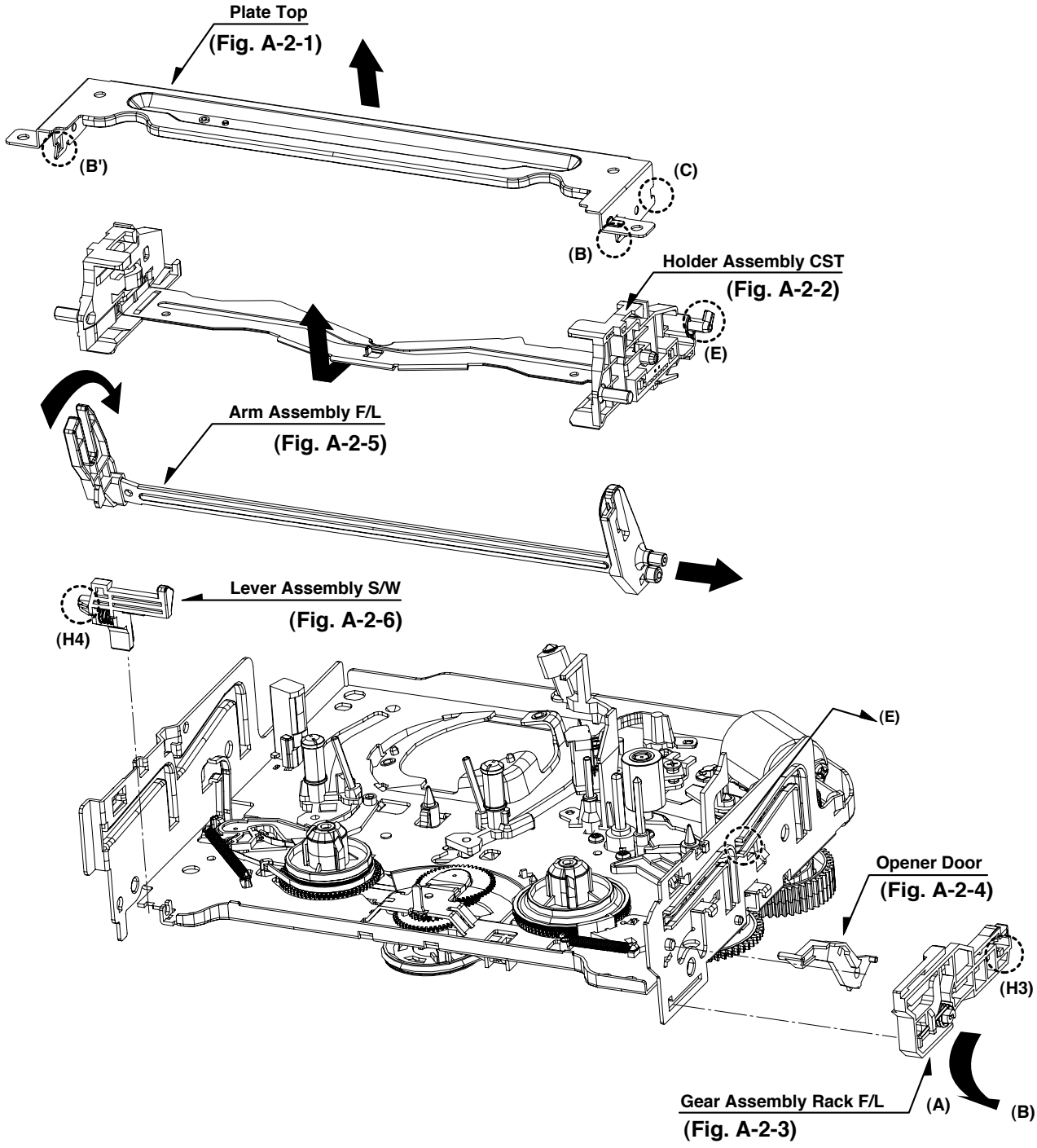


Fig. A-2

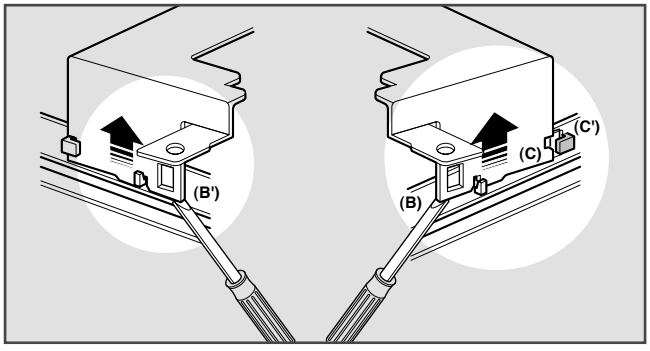
DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

2. Disassembly of Plate Top (Fig. A-2-1)

1) Separate the right part while leaning back the (B) part of the plate top toward the arrow direction.
2) Separate the left part while leaning back the (B') part of the plate top toward the arrow direction.
(Tool used: Tool such as (-) driver, auger, etc with pointed or flat end)

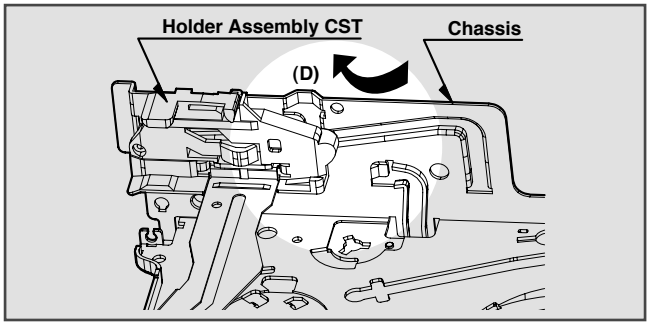
CAUTIONS

Assemble while pressing the (C), (C') part after corresponding them as in drawing.



3. Holder Assembly CST (Fig. A-2-2)

1) Firstly separate the left part from the groove on the (D) part of chassis while moving the holder assembly CST toward the arrow direction.



2) Separate the right part from each groove of chassis

CAUTIONS

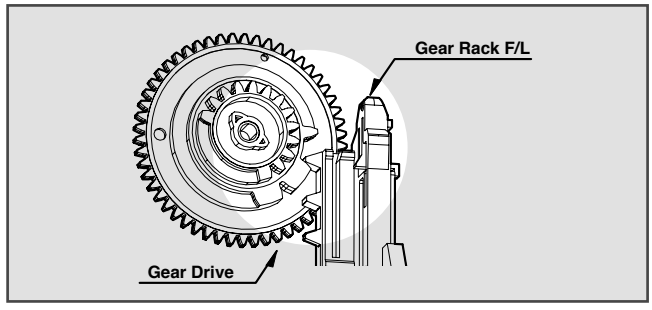
Assemble by inserting the left part after firstly inserting the (E) part of the holder assembly CST into the groove on the (E') part of chassis.

4. Disassembly of Gear Assembly Rack F/L (Fig. A-2-3)

1) Separate the hook (H3) while leaning ahead the hook (3) after moving the gear assembly rack F/L toward the arrow (A) direction.
2) Separate the gear assembly rack F/L toward the arrow (B) direction.

CAUTIONS

For the assembly, correspond the gear part of gear assembly rack F/L to the gear drive.



5. Opener Door (Fig. A-2-4)

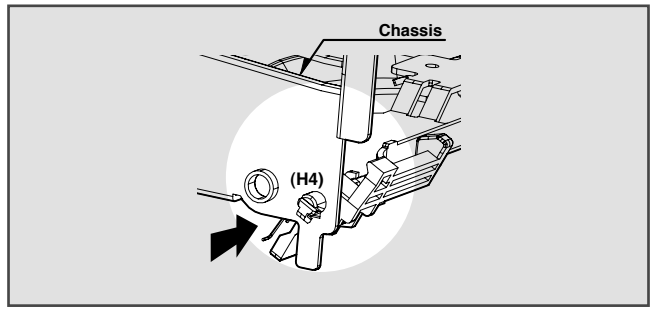
1) Separate the opener door ahead from the guide hole of chassis while turning it clockwise.

6. Arm Assembly F/L (Fig. A-2-5)

1) Firstly separate the left part of the arm assembly F/L from the groove of chassis while pushing the arm assembly F/L toward the arrow direction.
2) Separate the right part from the groove of chassis.).

7. Lever Assembly S/W (Fig. A-2-6)

1) Separate the lever assembly S/W while pushing it toward the arrow direction after removing the hook (4) on the left side of chassis.



DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

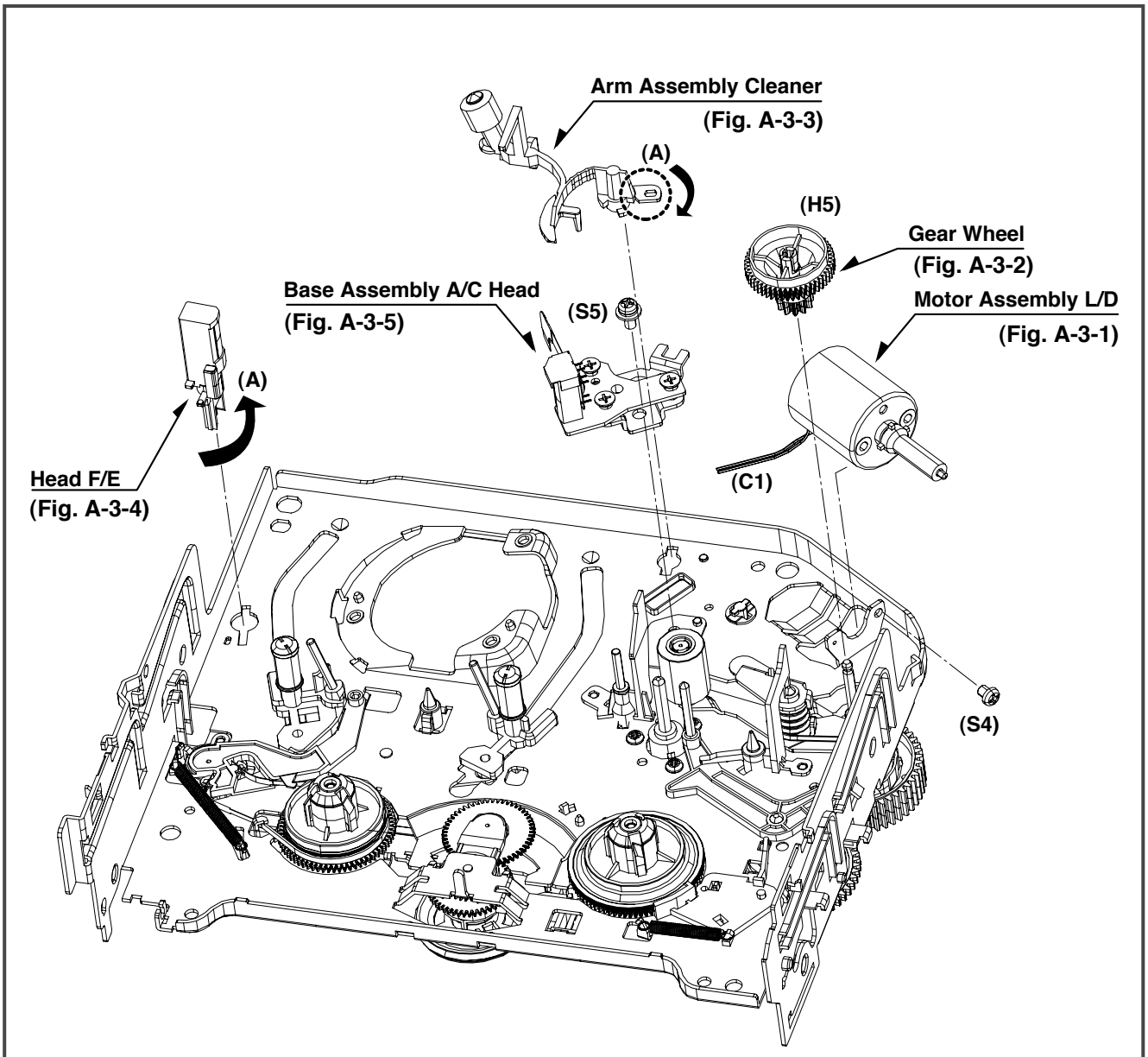


Fig. A-3

8. Motor Assembly L/D (Fig. A-3-1)

1) Take the connector (C1) connected to the Capstan motor PCB out.
2) Remove a screw (S4) of the chassis (S4) and step backward, and disassemble it while holding it up.

9. Gear Wheel (Fig. A-3-2)

1) Release the hook (H5) of the gear wheel and disassemble it upward.

10. Arm Assembly Cleaner (Fig. A-3-3)

1) Separate the (A) part of Fig. A-3-1 from the embossing of chassis, and hold it up while turning it anti-clockwise.

11. Head F/E (Fig. A-3-4)

1) Separate the (A) part of the head F/E from the embossing of chassis, and hold it up while turning it anti-clockwise.

12. Base Assembly A/C Head (Fig. A-3-5)

1) Release a screw (S5) and disassemble while holding it up.

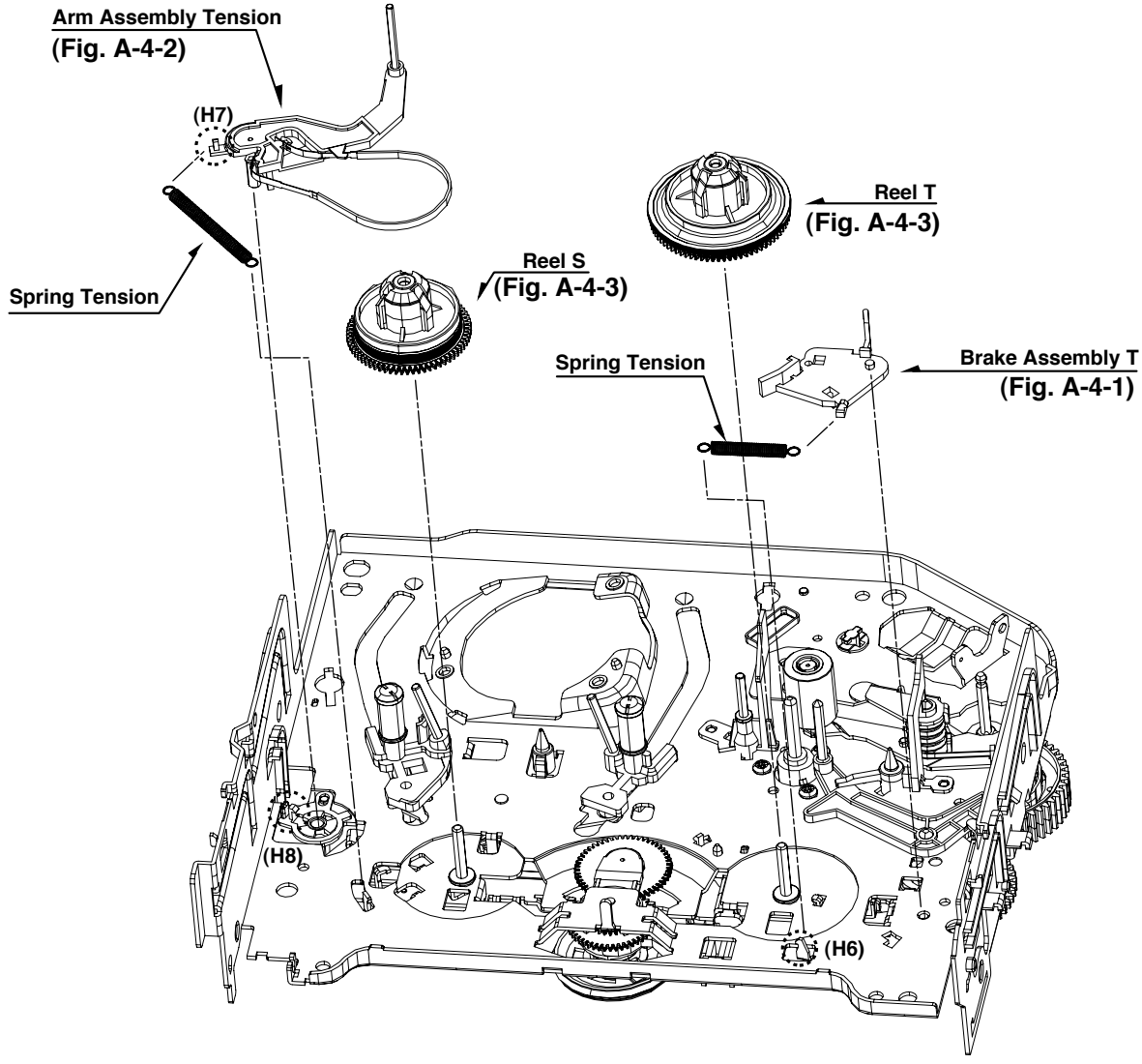


Fig. A-4

13. Brake Assembly T (Fig. A-4-1)

1) Release the spring tension from the lever spring hook (H6).
2) Disassemble the brake assembly T while holding it upward.

14. Arm Assembly Tension (Fig. A-4-2)

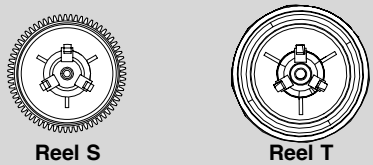
1) Release the spring tension the hook (H7) from the arm assembly tension.
2) After releasing the hook (H8) of the base tension, separate it while holding it up.

CAUTIONS

Spring used for both brake assembly T and arm assembly tension is used (2EA used).

15. Reel S/Reel T (Fig. A-4-3)

1) Disassemble the reel S/ reel T while holding it up (comparison between Reel S and Reel T)



DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

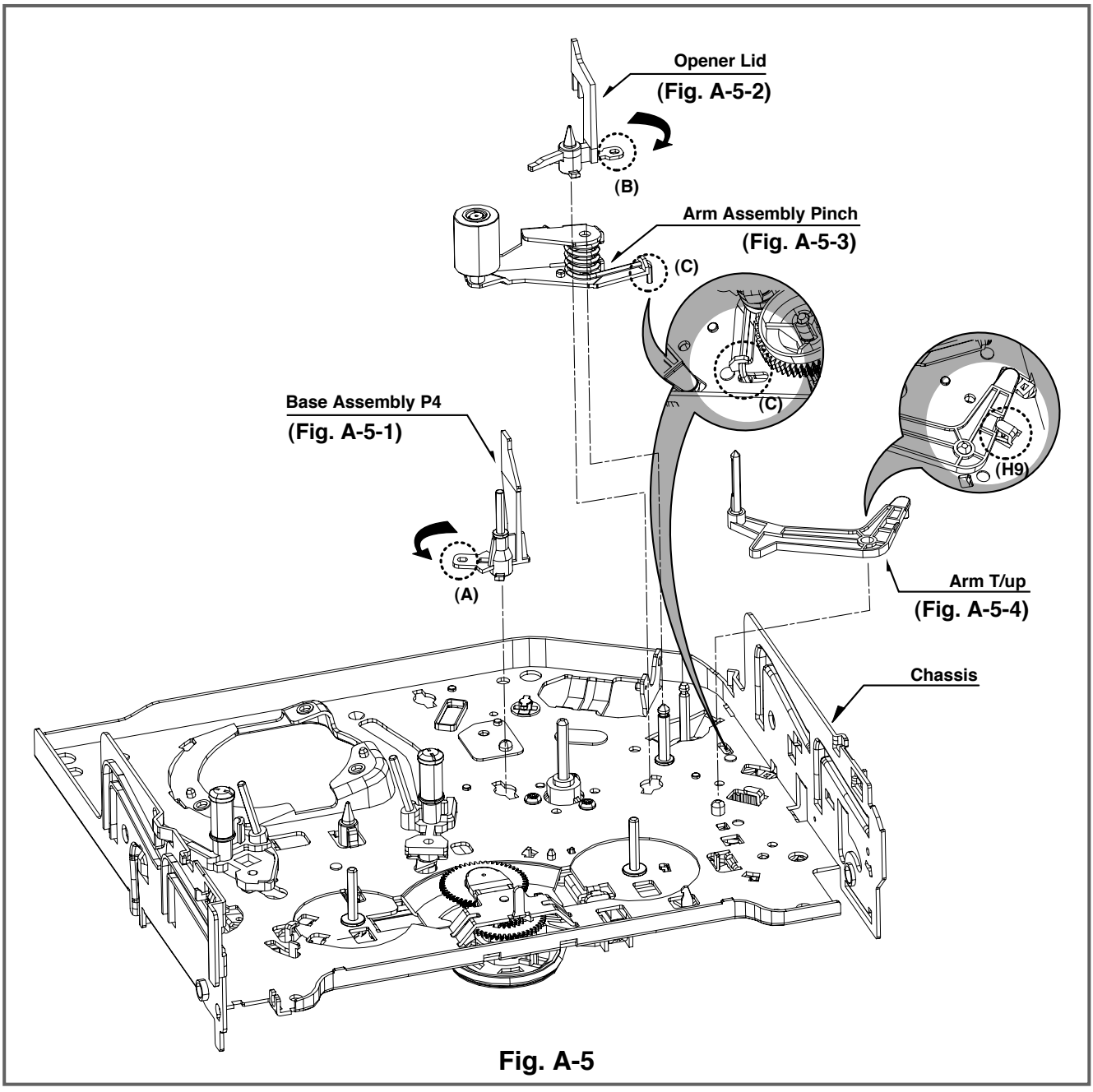


Fig. A-5

16. Base Assembly P4 (Fig. A-5-1)

1) Release the (A) part of the base assembly P4 from the embossing of chassis.
2) Hold the base assembly P4 up while turning it anti-clockwise.

17. Opener Lid (Fig. A-5-2)

1) Release the (B) part of the opener lid from the embossing of chassis.
2) Disassemble the opener lid upward while turning it anti-clockwise.

18. Arm Assembly Pinch (Fig. A-5-3)

1) Hold the arm assembly pinch up.

19. Arm T/up (Fig. A-5-4)

1) Turn the arm T/up to release the anchor jaw (H9) part of chassis and then hold it upward.

CAUTIONS

For the assembly, check the (C) part of the arm assembly pinch is assembled as in drawing.

- REVERSE THE MECHANISM.

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

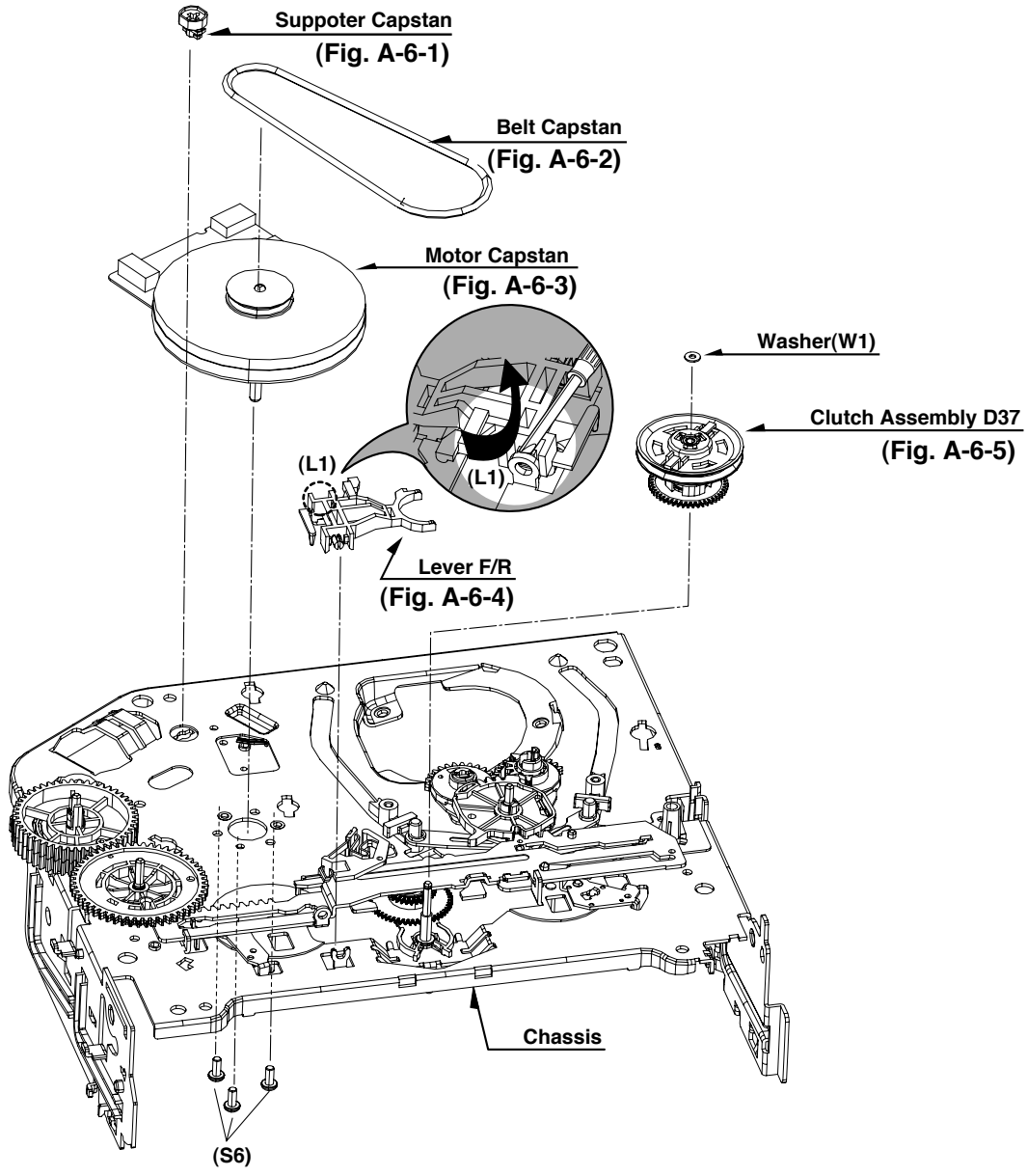


Fig. A-6

20. Supporter, Capstan (Fig. A-6-1)

1) Turn the supporter and Capstan by 90 deg. clockwise with a driver for disassembly.

21. Belt Capstan (Fig. A-6-2) / Motor Capstan (Fig. A-6-3)

1) Separate the belt Capstan.
2) Undo 3 screws (S6) on the bottom side of chassis and disassemble it upward.

22. Lever F/R (Fig. A-6-4)

1) Release the locking tab (L1) and then disassemble it upward.

23. Clutch Assembly D37 (Fig. A-6-5)

1) Remove the washer (W1) and then disassemble it upward.

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

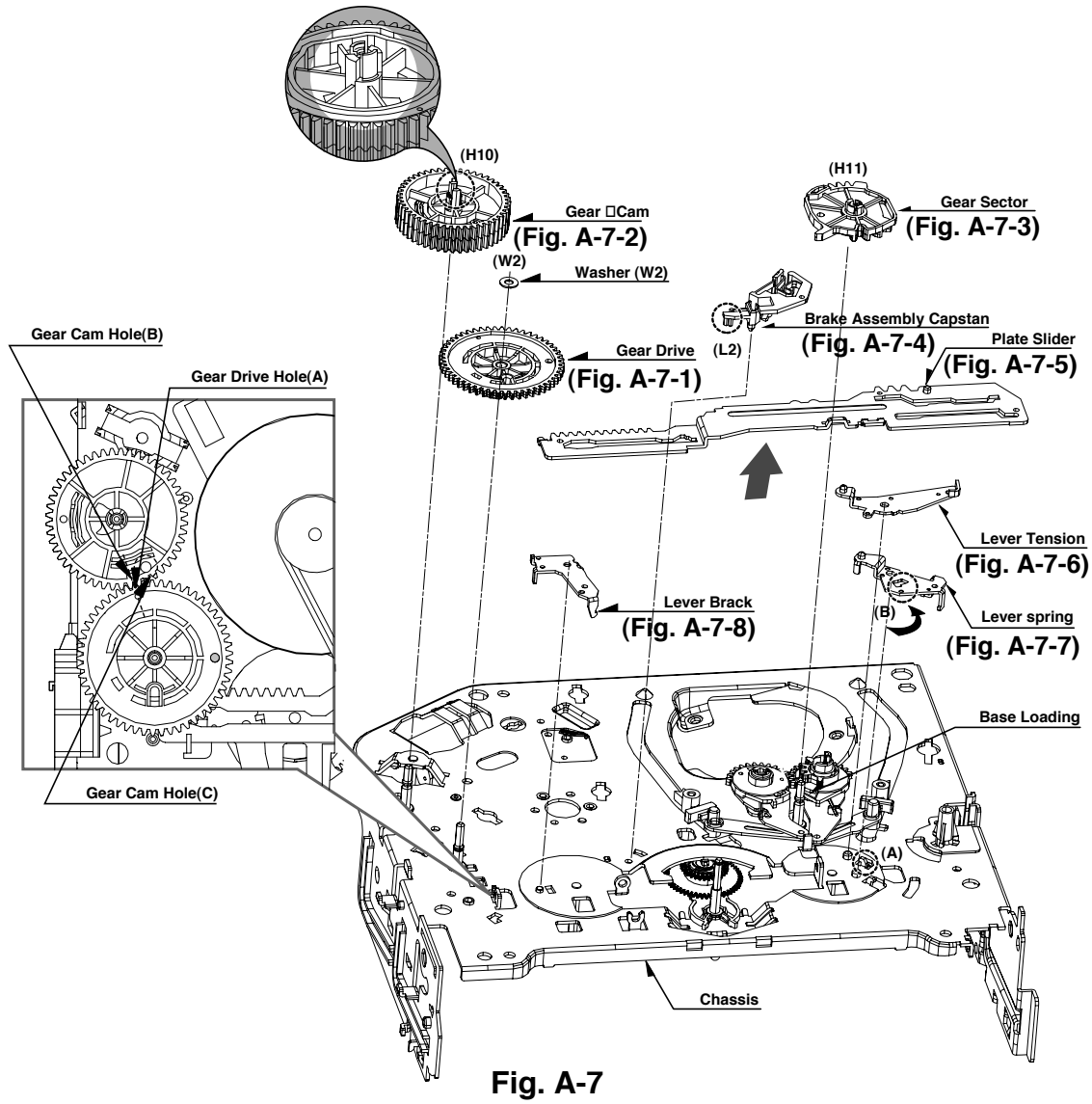


Fig. A-7

24. Gear Drive (Fig. A-7-1)/ Gear Cam (Fig. A-7-2)

1) Remove the washer (W2) and then disassemble the gear drive.
2) Release the hook (H10) of the gear cam and then disassemble it upward.

CAUTIONS

For the assembly, adjust both the gear driver hole (A) and the gear cam hole (B) straightly and then correspond the gear cam hole (C) to the chassis hole.

25. Gear Sector (Fig. A-7-3)

1) Release the hook (H11) of the gear sector and then hold the gear sector upward.

26. Brake Assembly Capstan (Fig. A-7-4)

1) Release the locking tab (L2) on the bottom side of the plate slider and then disassemble it upward.

27. Plate Slider (Fig. A-7-5)

1) Disassemble the plate slider while holding it up.

28. Lever Tension (Fig. A-7-6)

1) Release the lever tension from the guide (A) of chassis while turning it anti-clockwise.
2) Disassemble the lever tension while holding it up.

29. Lever Spring (Fig. A-7-7)

1) Release the (B) part of the lever spring from the guide (A) of chassis while turning it anti-clockwise.
2) Disassemble the lever tension while holding it up.

30. Lever Brake (Fig. A-7-8)

1) Disassemble the lever brake while holding it up.

DECK MECHANISM DISASSEMBLY

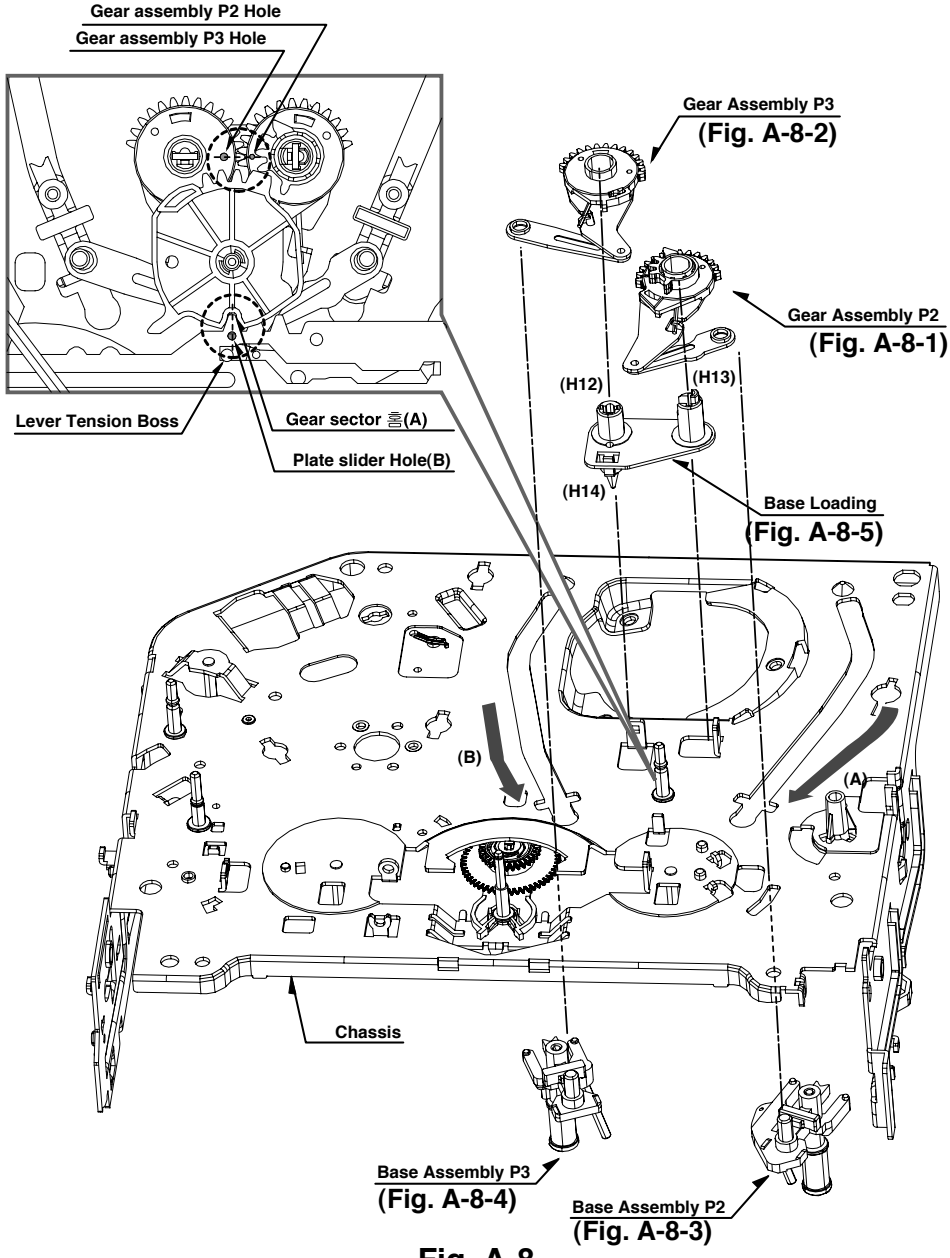


Fig. A-8

31. Gear Assembly P2 (Fig. A-8-1)/ Gear Assembly P3 (Fig. A-8-2)

1) Hold the gear assembly P2 upward.
2) Hold the gear assembly P3 upward.

CAUTIONS

For the assembly, check the holes of both the gear assembly P2 and the P3 are adjusted straightly, and then correspond the gear section groove (A) to the plate slider hole (B).

32. Base Assembly P2 (Fig. A-8-3)/ Base Assembly P3 (Fig. A-8-4)

1) Disassemble the base assembly P2 downward while moving it toward the arrow (A) direction along with the guide hole of chassis.
2) Disassemble the base assembly P2 downward while moving it toward the arrow (B) direction along with the guide hole of chassis.

33. Base Loading (Fig. A-8-5)

1) Release 3 hooks (H12, 13, 14) of the base loading, and then disassemble them upward.
   - Reverse the mechanism.

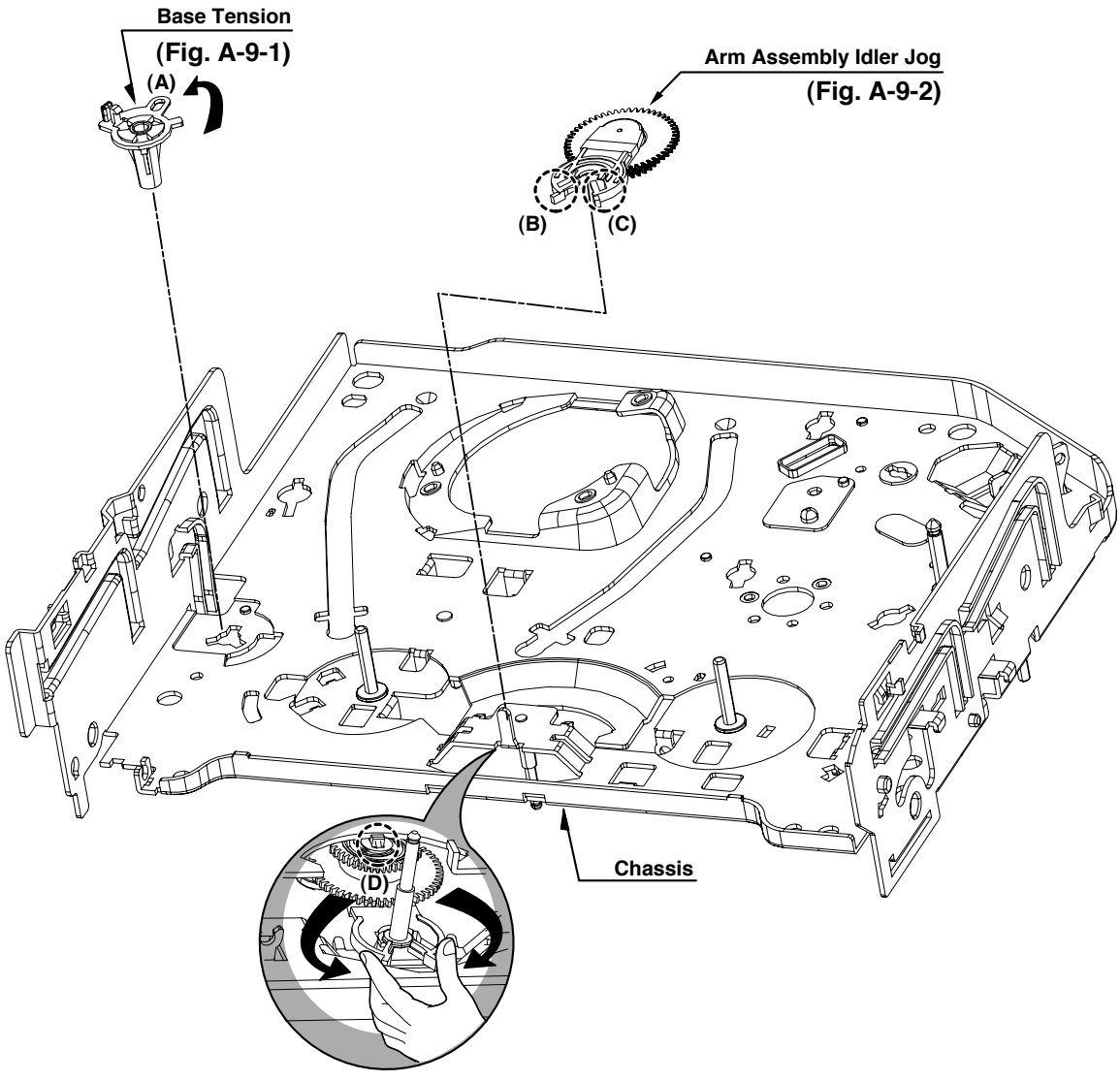


Fig. A-9

34. Base Tension (Fig. A-9-1)

1) Release the (A) part of the base tension from the embossing of chassis.
2) Hold the base tension upward while turning it anti-clockwise.

35. Arm assembly Idler Jog (Fig. A-9-2)

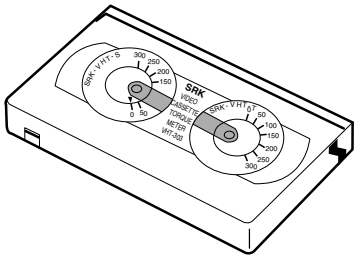
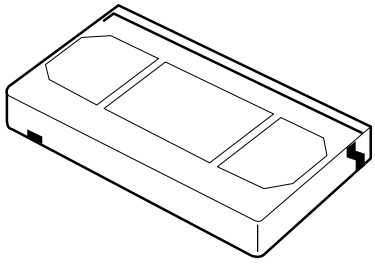
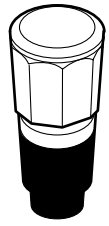
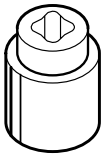
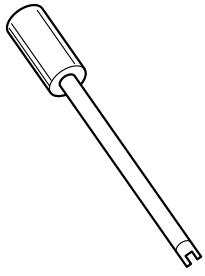
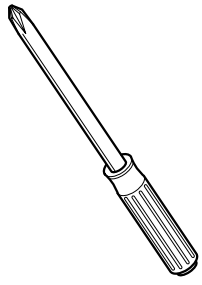
1) Push both (B), (C) parts in Fig. A-9-2 toward the arrow direction.
2) Disassemble the arm assembly idler upward.

CAUTIONS

Take care to ensure that the (D) part in the drawing is not hung to chassis in disassembly.

DECK MECHANISM ADJUSTMENT

• Fixtures and Tools for Service

1. Cassette Torque Meter **SRK-VHT-303(Not SVC part)** **Part No:D00-D006** 	**2. Alignment tape** **Part No NTSC:DTN-0001** **PAL:DTN-0002** 	**3. Torque gauge** **600g.Cm ATG** **Part No:D00-D002** 
4. Torque gauge adaptor **Part No:D09-R001** 	**5. Post height adjusting driver** **Part No:DTL-0005** 	**6. + Type driver (ø5)** 

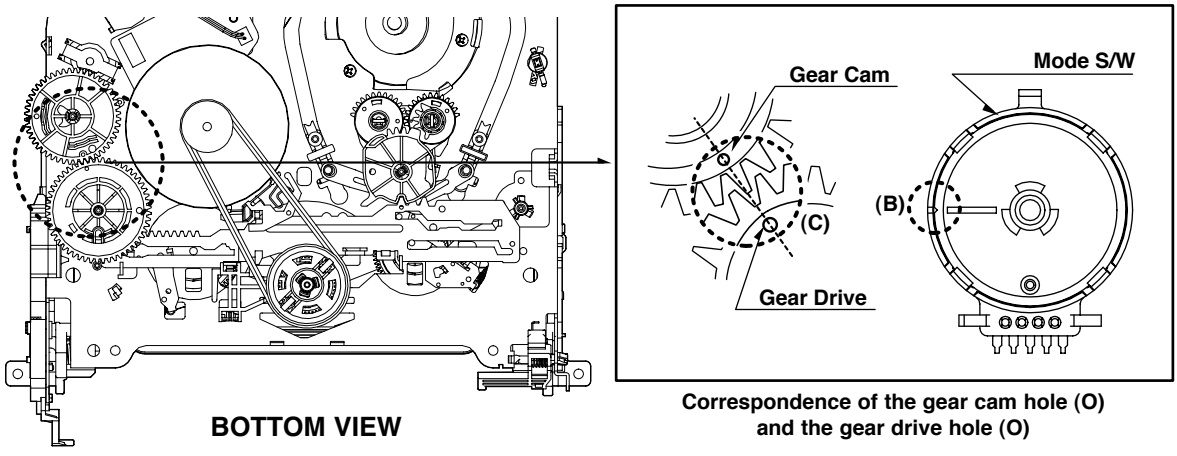
DECK MECHANISM ADJUSTMENT

1. Mechanism Assembly Mode Check

Purpose of adjustment : To make tools normally operate by positioning tools accurately.		
Fixtures and tools used	**VCR (VCP) status**	**Checking Position**
• Blank Tape (empty tape)	• Eject Mode (with cassette withdrawn)	• Mechanism and Mode Switch

1) Turn the VCR on and take the tape out by pressing the eject button.
2) Separate both top cover and plate top, and check both the hole (A) of gear cam and the hole (A') of chassis correspond (Fig. C-2).
3) If it is done as in the paragraph 2): Turn the gear cam as in No.2) after mantling the motor assembly L/D.
4) Undo the screw fixing the deck and the main frame, and separate the deck assembly. Check both the hole (A) of gear cam and the hole (A') of chassis correspond (Fig. C-1).
5) Check the mode S/W on the main P.C. board locates at a proper position as in (B) of the Fig. (C-1).
6) Connect the deck to the main P.C. board and perform all types of test.

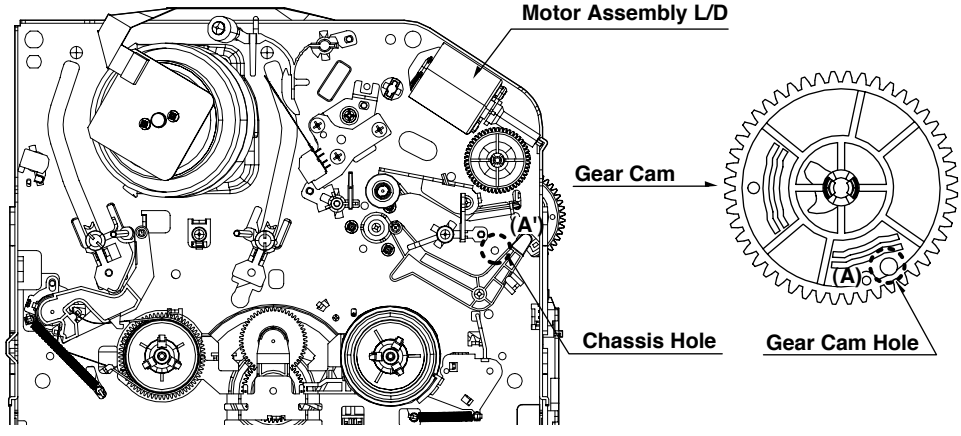
CHECK DIAGRAM



BOTTOM VIEW

Correspondence of the gear cam hole (O) and the gear drive hole (O)

Fig. C-1



TOP VIEW

Fig. C-2

DECK MECHANISM ADJUSTMENT

2. Previous Preparation for Deck Adjustment

(Preparation to load the VCR (VCP) with cassette tape not inserted)

1) Take the power cord from the consent.
2) Separate the top cover and the plate assembly top.
3) Insert the power cord into again.
4) Turn the VCR (VCP) on and load the cassette while pushing the lever stopper of the holder assembly CST backward. In this case, clog both holes on the housing rail part of chassis to prevent detection of the end sensor.

If doing so, proceeding to the stop mode is done. In this status, input signals of all modes can be received. However, operation of the Rewind and the Review is impossible since the take-up reel remains at stop status and so cannot detect the reel pulse (however, possible for several seconds).

3. Torque Measuring

Purpose of Measuring : To measure and check the reel torque on the take-up part and the supply part that performs basic operation of the VCR (VCP) for smoothly forwarding the tape.
Measure and check followings when the tape is not smoothly wound or the tape velocity is abnormally proceeded:

Fixtures and tools used	VCR (VCP) status	Measuring method
• Torque Gauge (600 g.cm ATG) • Torque Gauge Adaptor • Cassette Torque Meter SRK-VHT-303	• Play (FF) or Review (REW) Mode	• Try to operate the VCR (VCP) per mode with the tape not inserted (See '2. Prior Preparation for Deck Adjustment). • Measure after adhering and fixing the torque gauge adaptor to the torque gauge (Fig. C-3-1) • Read scale of the supply or take-up part of the cassette torque meter (Fig. C-3-2).

Item	Mode	Instruments	Reel Measured	Measuring Value
Fast forward Torque	Fast Forward	Torque Gauge	Take-Up Reel	More than 400g°cm
Rewind Torque	Rewind	Torque Gauge	Supply Reel	More than 400g°cm
Play Take-Up Torque	Play	VHT-303	Take-Up Reel	40~100g°cm
Review Torque	Review	VHT-303	Supply Reel	120~210g°cm

NOTE

Adhere the torque gauge adaptor to the torque gauge for measuring the value.

• Torque Gauge (600g.cm ATG)

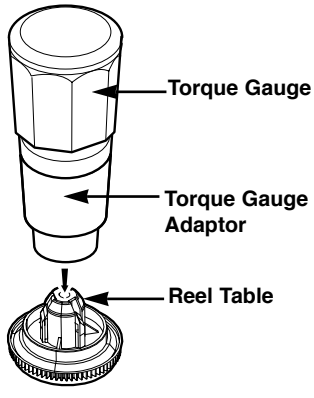


Fig. C-3-1

• Cassette Torque Meter (SRK-VHT-303)

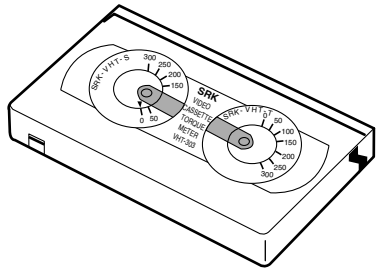


Fig. C-3-2

DECK MECHANISM ADJUSTMENT

4. Guide Roller Height Adjustment

Purpose of adjustment : To ensure that the bottom surface of the tape can travel along with the tape lead line of the lower drum by constantly and adjusting and maintaining the height of the tape.

4-1. Prior Adjustment

Fixtures and tools used	VCR (VCP) status	Adjustment position
• Post Height Adjusting Driver	• Play or Review Mode	• The guide roller height adjusting screw on the supply guide roller and the take-up guide roller

Adjustment Procedure

1) Travel the tape and check the bottom surface of the tape travels along with the guide line of the lower drum.
2) If the tape travels toward the lower part of guide line on the lower drum, turn the guide roller height adjusting screw to the left
3) If it travels to the upper part, turn it to the right.
4) Adjust the height of the guide roller to ensure that the tape is guided on the guide line of the lower drum at the inlet/outlet of the drum. (Fig. C-4-1)

ADJUSTMENT DIAGRAM

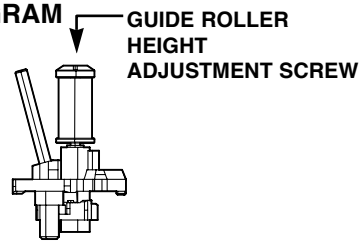


Fig. C-4-1

4-2. Fine Adjustment

Fixtures and tools used	Measuring tools and connection position	VCR (VCP) status	Adjustment position
• Oscilloscope • Standard test tape • Post height adjusting driver	• CH-1: PB RF Envelope • CH-2: NTSC : SW 30Hz PAL : SW 25Hz • Head switching output point • RF Envelope output point	• Play the standard test tape.	• Guide roller height adjusting screw

1) Play the standard test tape after connecting the probe of oscilloscope to the RF envelope output point and the head switching output point.
2) Tracking control (playback) : Locate it at the center (Set the RF output to the maximum value via the tracking control when such adjustment is completed after the drum assembly is replaced.)
3) Height adjusting screw: Flatten the RF waveform. (Fig. C-4-2)
4) Move the tracking control (playback) to the right/left. (Fig. C-4-3)
5) Check the start and the end of the RF output reduction width are constant.

CAUTIONS

There must exist no crumpling and folding of the tape due to excess adjustment or insufficient adjustment.

Waveform

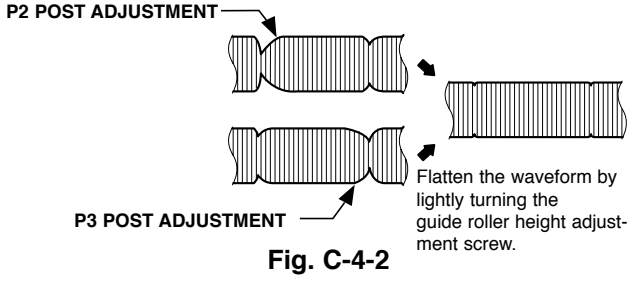

P2 POST ADJUSTMENT
P3 POST ADJUSTMENT
Flatten the waveform by lightly turning the guide roller height adjustment screw.

Fig. C-4-2

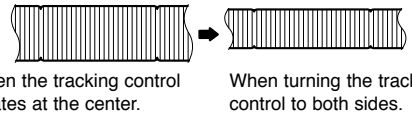
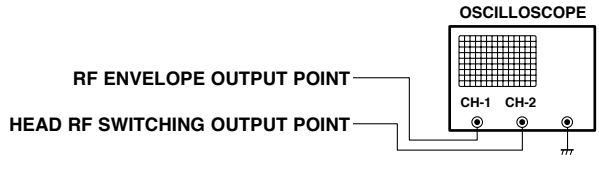


Fig. C-4-2

Connection Diagram



DECK MECHANISM ADJUSTMENT

5. Audio/Control (A/C) Head Adjustment

Purpose of adjustment : To ensure that audio and control signals can be recorded and played according to the contract tract by constantly maintaining distance between tape and head, and tape tension between the P3 post and the P4 post.

5-1. Prior Adjustment (performed only when no audio output appears in play of the standard test tape)

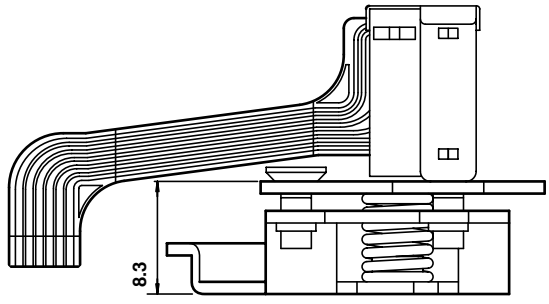
Fixtures and tools used	VCR (VCP) status	Adjustment position
• Blank Tape (Empty Tape) • Driver (+) Type ø 5	• Play the blank tape (empty tape).	• Tilt adjusting screw (C) • Height adjusting screw (B) • Azimuth adjusting screw (A)

Adjustment Procedure/Adjustment Diagrams

1) Basically use the A/C head assembly adjusted as in SPEC.
2) Check there is crumpling and folding of the tape around the A/C head. If it is, Turn and adjust the tilt adjusting screw to ensure that the tape corresponds to the bottom guide of the P4, and recheck the tape path after proceeding play for 4-5 seconds.
3) Where the tape bottom is not equal to Fig. C-5-3, Adjust the height by using the height adjusting screw (B) and then readjust it by using the tilt adjusting screw (C).

CAUTIONS

Always check the height of the A/C head since most ideal height of A/C head can be obtained when the bottom part of the tape is away 0.2 ~ 0.25mm from the bottom part of the A/C head.



A/C Head Base

Fig. C-5-1

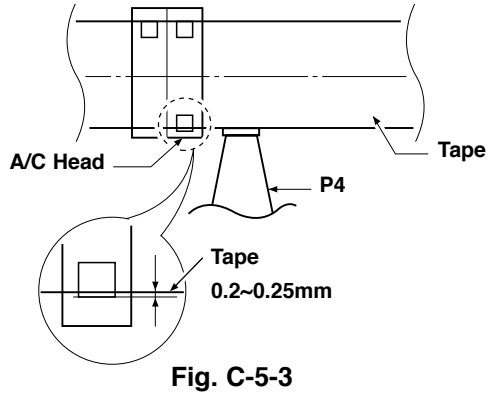
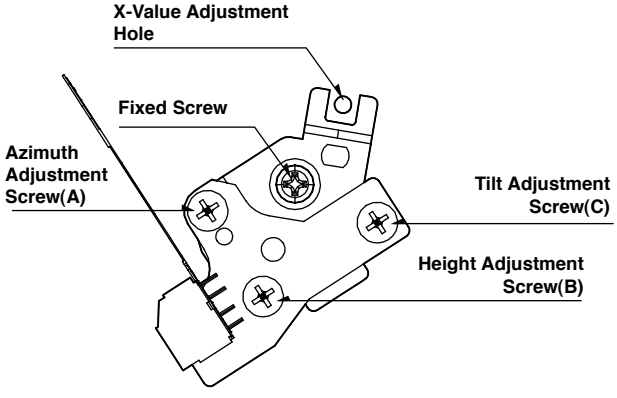


Fig. C-5-3



A/C Head Assembly

Fig. C-5-2

5-2. Tape Path Check between Pinch Roller and Take up Guide (Check in the Rev Mode)

1) Check the tape pass status between the pinch roller and the take-up guide.(Check there is crumpling of the tape pass and folding of the take-up guide.)
   (1) When holding of the take-up guide bottom occurs Turn the tilt adjusting screw (C) clockwise and travel it stably to ensure there is no crumbling or folding of the tape.
   (2) When holding of the take-up guide top occurs Turn the tilt adjusting screw (C) anti-clockwise and travel it stably to ensure there is no crumbling or folding of the tape.

2) Check there is folding of the tape at the bottom or top of the take-up guide in cutting-off the REV mode

CAUTIONS

If the RF waveform is changed after adjusting the A/C head, perform fine adjustment to ensure the RF waveform is flattened.

5-3. Fine Adjustment (Azimuth Adjustment)

Fixtures and tools used	Connection position	VCR (VCP) status	Adjustment position
• Oscilloscope • Standard test tape (only for SP) • Driver (+) Type Ø 4	• Audio Output Jack	• Play the standard test • Tape, 1KHz, 7KHz.	• Azimuth Adjusting Screw (A) • Height Adjusting Screw (B)

Adjustment Procedure

1) Connect the probe of Oscilloscope to the audio output jack.
2) Ensure that Audio 1KHz, 7KHz output is flattened at the maximization point by adjusting the Azimuth adjusting screw (A).

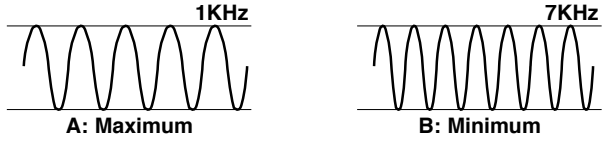
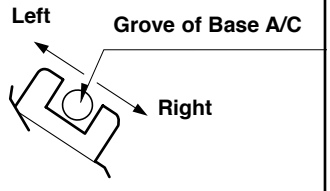


Fig. C-5-4

6. X-distance Adjustment

Purpose of adjustment : To maintain compatibility with other VCR (VCP).

Fixtures and tools used	Connection position	VCR (VCP) status	Adjustment position
• Oscilloscope • Standard test tape (only for SP) • Driver (+) Type Ø 4	• CH-1: PB RF Envelope • CH-2: NTSC ; SW 30Hz PAL:SW 25Hz • Head switching output point • RF Envelope output point	• Play the standard test tape.	

Adjustment Procedure

1) After releasing the auto tracking, lightly turn the fixing screw. Turn the (+) type driver (Ø 3 ~ Ø 4) on the X-distance adjusting hole to the right or left. Adjust the RF envelope level to the maximum point and then fix the fixing screws.
2) For the 31mm head, adjust it with the SP tape recorded in the width of 31mm since the head travels on the tape track only for SP with the width of 58mm.

Connection Diagram

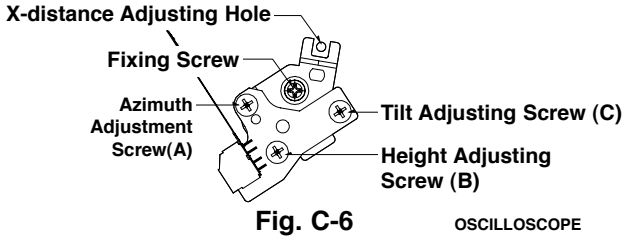
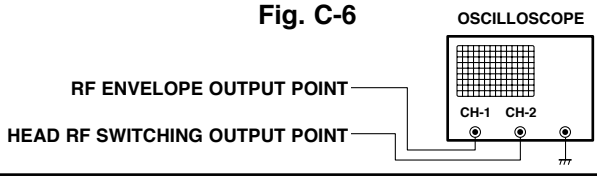


Fig. C-6



DECK MECHANISM ADJUSTMENT

7. Adjustment after Drum Assembly (Video Heads)

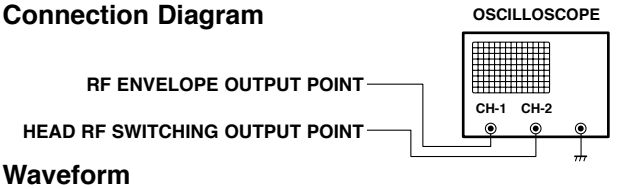
Purpose of adjustment : To adjust and stabilize the height change, X-distance change, etc depending on the guide roller after assembling the drum.

Fixtures and tools used	Connection position	VCR (VCP) status	Adjustment position
• Oscilloscope • Standard test tape (only for SP) • Post Height Adjusting Driver • Driver (+) Type Ø 5	• CH-1: PB RF Envelope • CH-2: NTSC : SW 30Hz PAL:SW 25Hz • Head switching output point • RF Envelope output point	• Play the blank tape. • Play the standard test tape.	• Fine adjustment of guide roller • Switching Point • Tracking Preset • X-distance

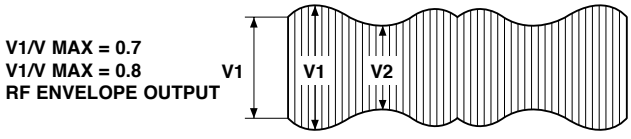
Checking/Adjustment Procedure

1) Play the blank tape (empty tape) and check whether the guide roller crumbles or wrinkles the tape and adjust it if necessary.
2) Check that the RF envelope output waveform is flat, and adjust the height of the guide roller while playing the standard test tape.
3) Adjust the switching point.
4) Check the RF envelope output is the maximum when the tracking control locates at the center. If not maximum, set up to ensure that RF envelope output becomes the maximum by turning the (+) type driver (Ø 3 ~ Ø 4) on the base A/C groove.

Connection Diagram



Waveform



8. Check of Traveling Device after Deck Assembly

8-1. Audio, RF Normalization Time (Locking Time) Check in Play after CUE or REV

Fixtures and tools used	Measuring standard	Connection position	VCR (VCP) status
• Oscilloscope • 6H 3KHz Color Bar Standard Test tape • Stop Watch	• RF Locking Time: Within 5 seconds • Audio Locking Time : Within 10 seconds	• CH-1: PB RF Envelope • CH-2: Audio output • RF Envelope output point • Audio output jack	• Play the 6H 3KHz Color Bar Standard Test tape.

Checking Procedure

1) Check that locking time of the RF and Audio waveform is fallen within the measuring standard in conversion of the play mode from the CUE or the REV mode.
2) Readjust the paragraph 5 and 6 if it deviates from the standard.

8-2. Check of Tape Curl and Jam Status

Fixtures and tools used	Fixtures and tools used	Fixtures and tools used
• T-160 Tape • T-120 Tape	• There must be no jam or curl at the first, middle and end position of tape.	• Travel the tape at the position of its first and end.

Checking Procedure

1) Check there is no abnormality of every traveling post status.
2) There must be no abnormal operation of the counter in occurrence of folding of the bottom tape. There must be not abnormality of audio signal in damage of the top tape.
3) If there is abnormality, readjust the adjustment paragraph 4 and 5.

1. Checking Points prior to Repair

Following abnormal phenomena may be repaired by removal of foreign materials and oil supply. Check oiling is required at the checking set or cleaning status is complete. Determine that necessity of checking and repair the set exists after checking the using period of the set together with the user. In this case, followings must be checked:

Phenomena	Checking Points and Cause	Replace-ment
Color beat	Pollution of Full-Erase Head	o
S/N, Color Faded	Pollution of Video Head	o
Horizontal, Vertical Jitte	Pollution of Video Head or Tape Transport System	o
Poor Sound, Low Sound	Pollution of Audio/Control Head	o
No tape wound or tape wound loosely. FF or REW impossible, or slow turning	Pollution of Pinch Roller or Belt Capstan Belt	o
Tape loosely wound in REV or Unloading	Deterioration of Clutch Assembly D37 Torque	o
	Pollution of Drum and Traveling Device	Fig. C-9-3

CAUTIONS

If operation of the position with (O) mark is abnormal even after removing cause, replace it with substitute product since it shows damage or wearing.

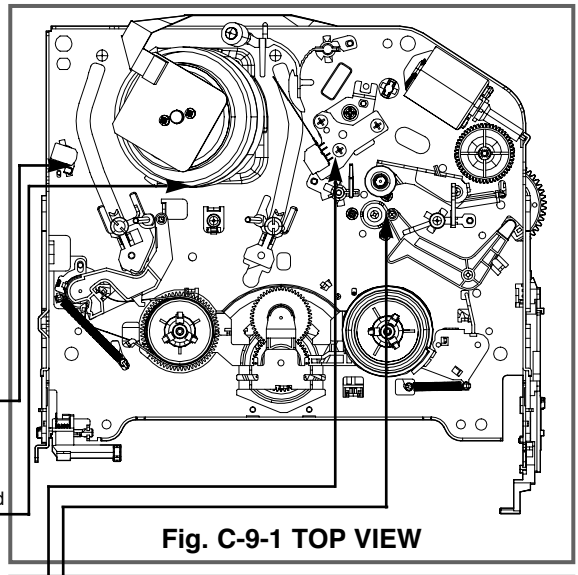


Fig. C-9-1 TOP VIEW

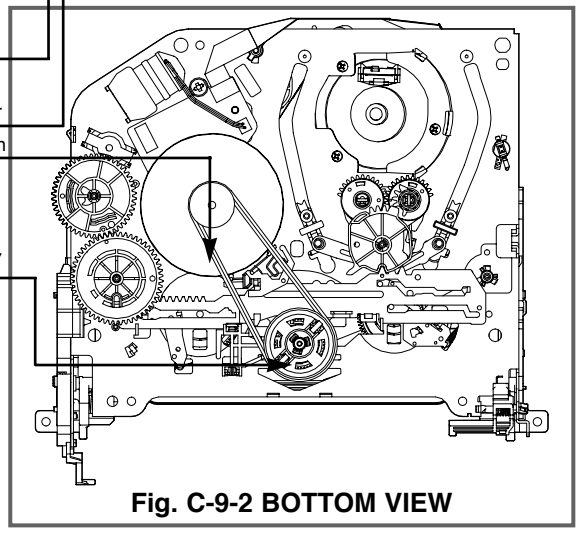


Fig. C-9-2 BOTTOM VIEW

*** No. (1) ~ (12) shows sequence that the tape moves from the supply reel to the take-up reel.)**

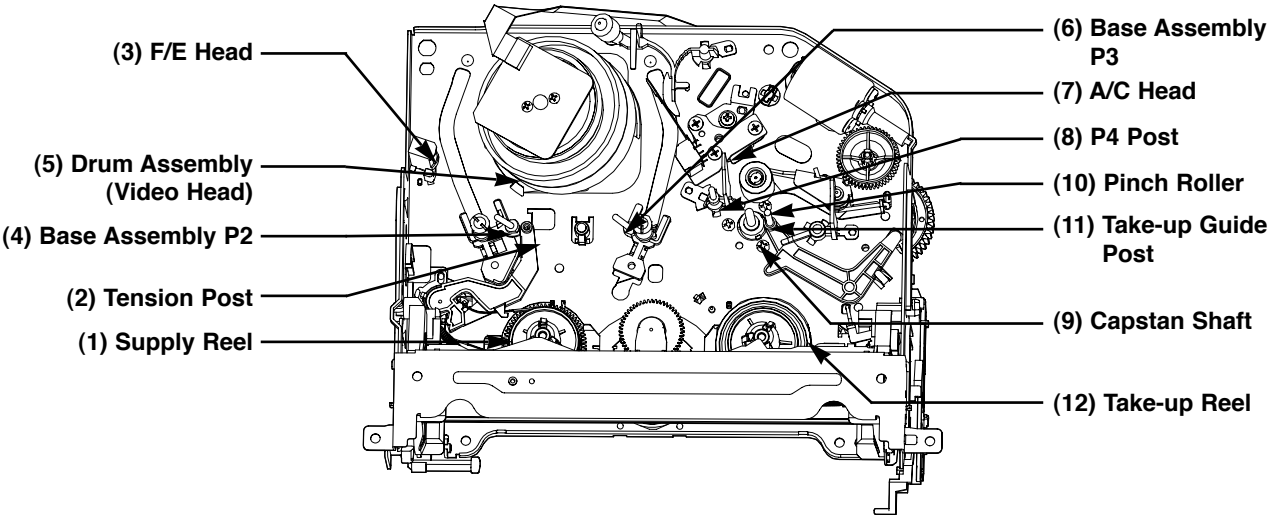


Fig. C-9-3 Tape Transport System

2. Essential Check and Repair

Recording density of the video is far higher than the audio. Therefore video parts are very precise so as to allow only error of 1/1000mm or so in order to maintain compatibility with other videos.
If one of these parts is polluted or old, same phenomena will appear as they are damaged.
To maintain clear screen, regular check, replacement of old and damaged parts and oil supply, etc are essential.

3. Regular Check and Repair

Check and repair schedule is not constant since they vary depending on method that the consumer uses video and environment where the video is installed at.
However, for the video used by common household, good screen will be maintained if regular check and repair per 1,000 hour is performed. The following chart shows relationship between using time and checking time:

Table 1

Time Requiring Checking / Average hours used per day	About 1 year	About 18 months	About 3 years
One hour	■	■	■
Two hours	■	■	
Three hours	■		

4. Tools for Check and Repair

(1) Grease: Floil G-3114 (KANTO) or equivalent grease (Green)
(2) Grease: Kanto G-754, PL-433 (Yellow)
(3) Alcohol (Isopropyl Alcohol)
(4) Cleaning Patch (cloth)

5. Maintenance Process

5-1) Removal of Foreign Material

(1) Removal of foreign material from video head (Fig. C-9-4)
Firstly try to use a cleaning tape.
Use a cleaning patch if foreign materials are not removed with the cleaning tape due to severe dirty of the head. Soak the cleaning patch in alcohol and put it to the head tip. Smoothly turn the drum (turning cylinder) to the right or left (In this case, the cleaning patch must not be moved vertically).
After completely drying the head, test the traveling status of the tape.
If alcohol (Isopropyl Alcohol) remains at the video head, the tape may be damaged when this solution touches with the head surface.

Never use a cloth bar (commercial sale)

(2) Wipe the tape transport system and the drive system with the cleaning patch soaked in alcohol (Isopropyl Alcohol) when removing foreign materials from them.
1) The part touched with the traveling tape is called as tape transport system. The drive system consists of parts to travel the tape.
2) Care must be exercised so that unreasonable force to change the pattern will be applied to the tape transport system during removal of foreign materials.

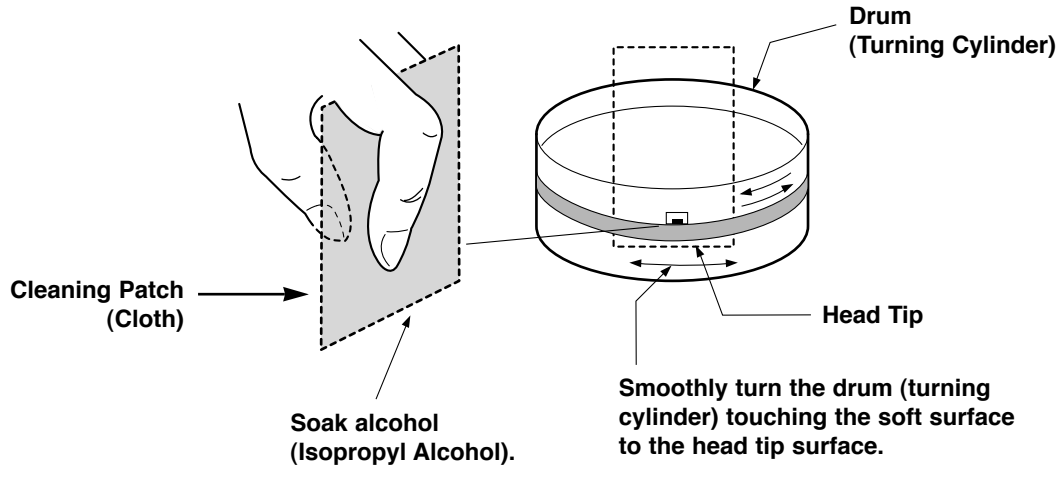


Fig. C-9-4

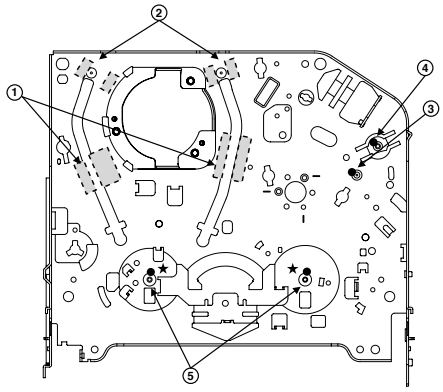
5-2) Grease Applications

(1) Grease Application Method

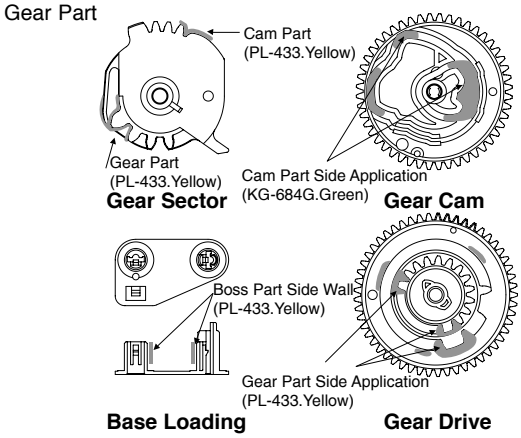
Apply grease by using a cloth swab or brush. Care must be exercised so that excess quantity should not be used. If the excessive quantity is applied, wipe it with the gauze soaked in alcohol (Isopropyl Alcohol).

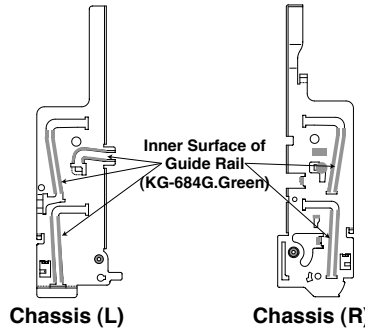
NOTE: POSITION OF GREASE APPLICATION

(1) Inner Side Surface and Top Surface of Loading Path
(2) Stable Adhesion Part of Base P2, P3
(3) Arm Pinch Shaft
(4) Gear Wheel Shaft
(5) Reel S. T. Shaft
(1) (2) (3) (4): KG-684G (Green)
(5): PL-433 (Yellow)



Chassis (TOP)

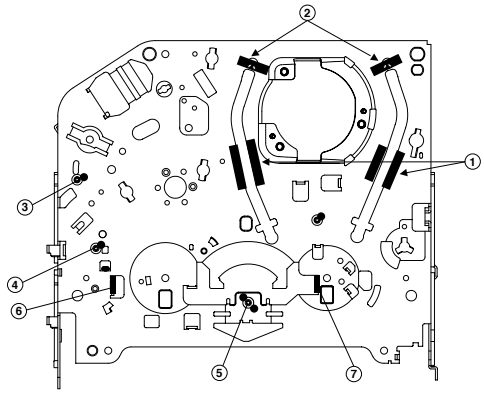




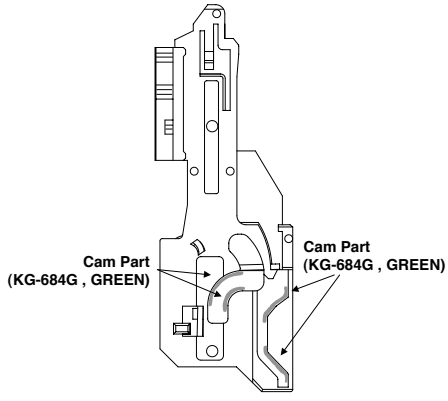
(2) Regular Grease Application

Apply grease to the designated application position every 500 hour.

(1) Inner Side Surface and Top Surface of Loading Path
(2) Stable Adhesion Part of Base P2, P3 Coil
(3) Gear Cam Shaft
(4) Gear Drive Shaft
(5) Clutch Shaft Groove
(6) Guide Part on the Plate Slider Side Wall (Left)
(7) Guide Part on the Plate Slider Side Wall (Right)
(1) (2) (3) (4) (5) (6) (7): KG-684G (Green)



Chassis (Bottom)



Gear Rack F/L

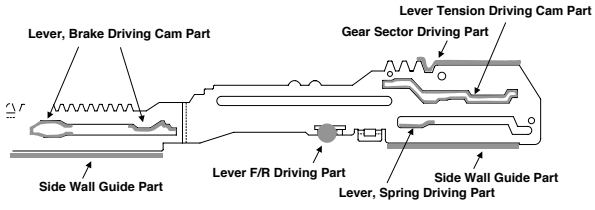
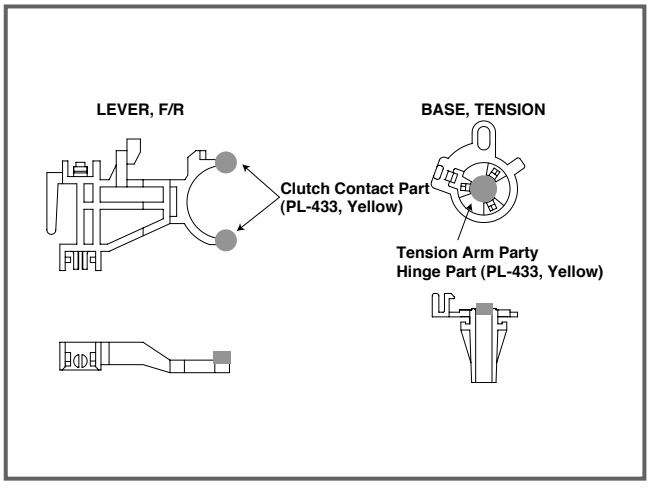
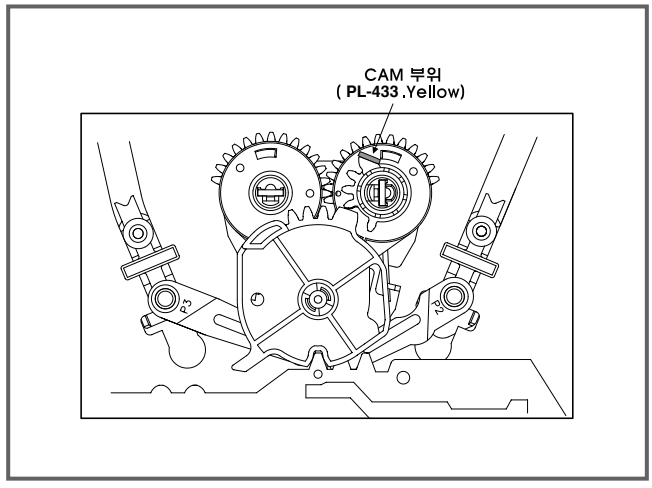

Lever, Brake Driving Cam Part
Lever Tension Driving Cam Part
Gear Sector Driving Part
Side Wall Guide Part
Lever F/R Driving Part
Side Wall Guide Part
Lever, Spring Driving Part

Plate Slider

Lever, F/R, Base, Tension



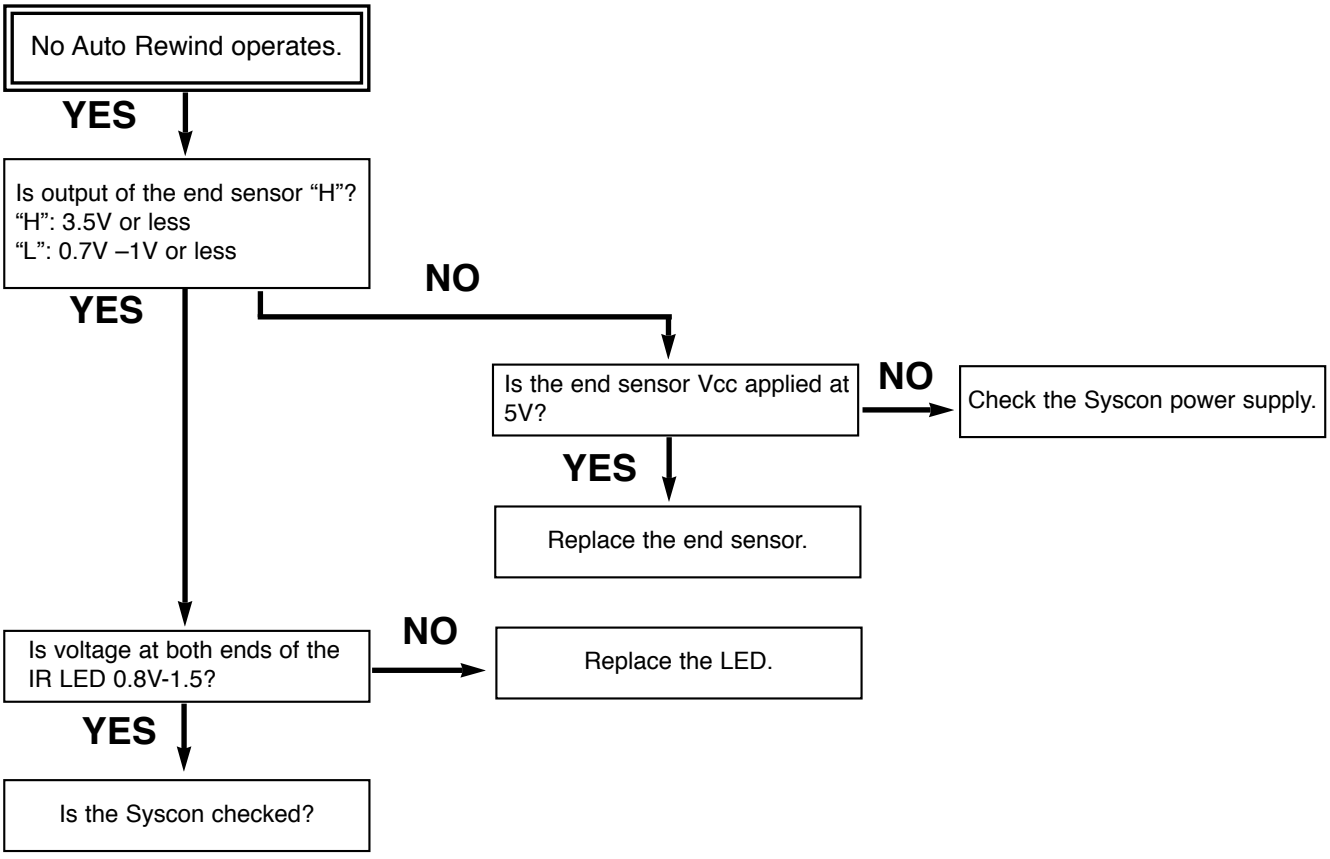
GEAR AY, P2 & P3



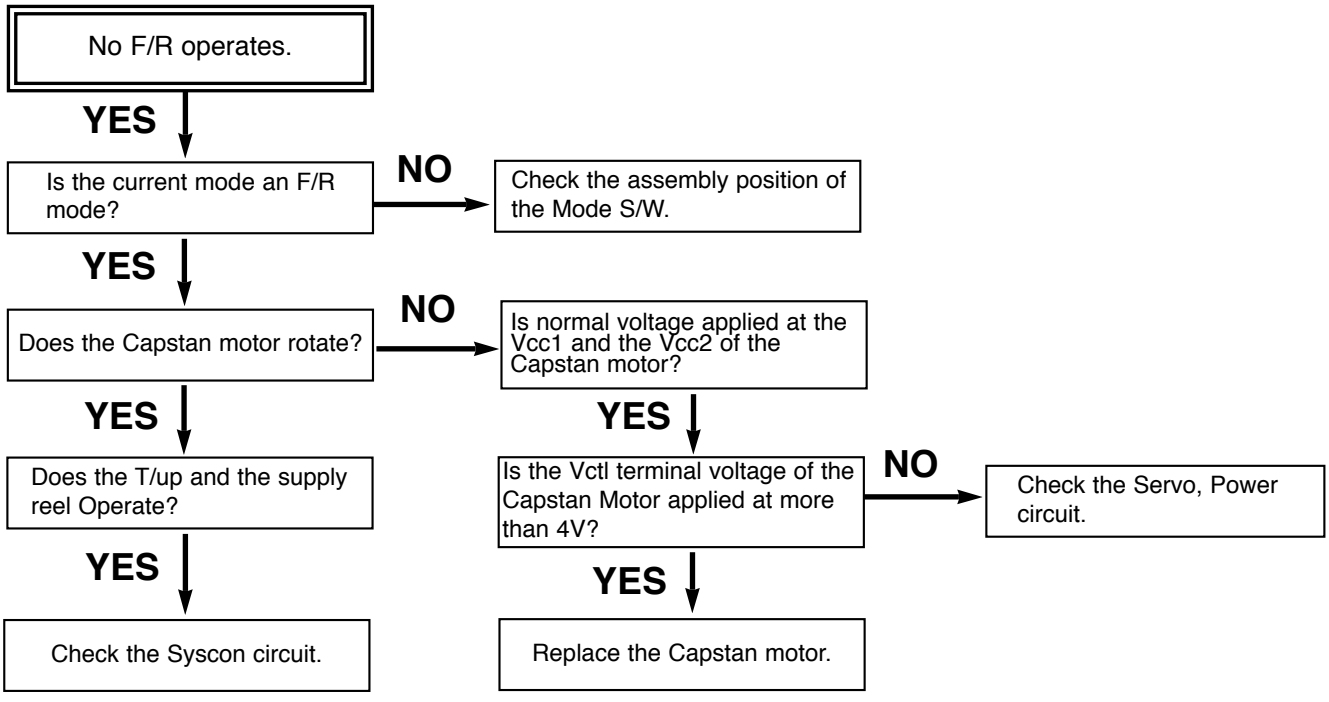
MECHANISM TROUBLESHOOTING GUIDE

1.Deck Mechanism

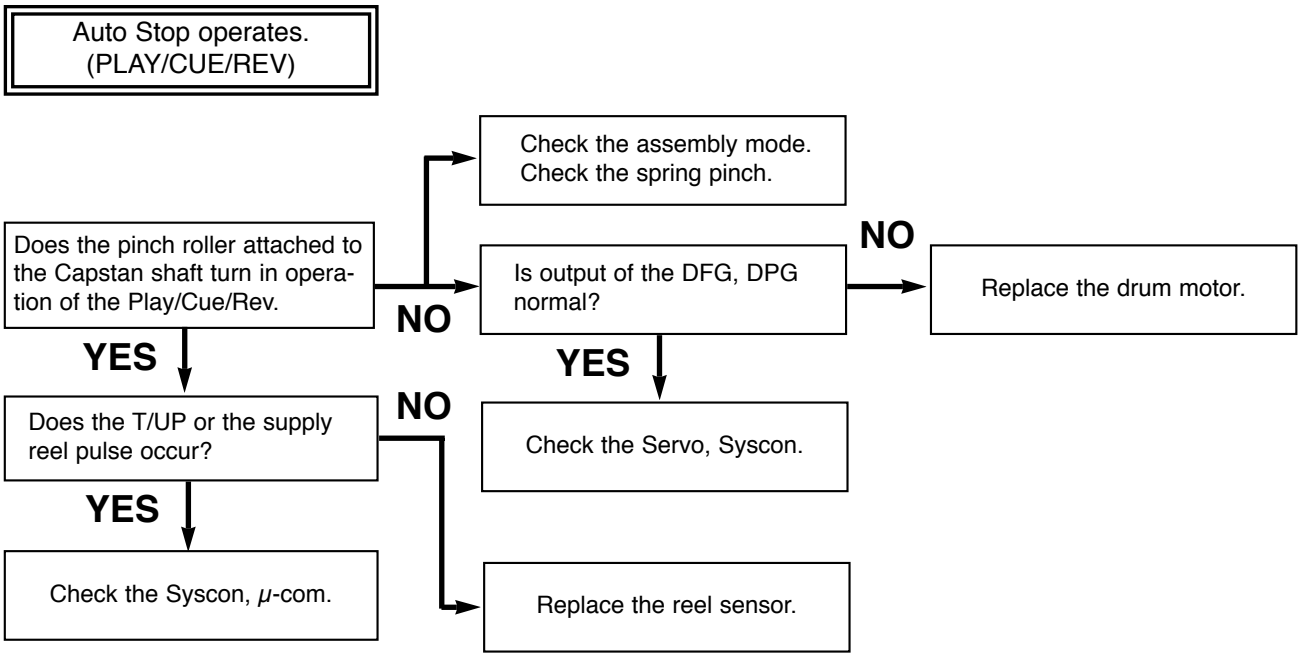
A.



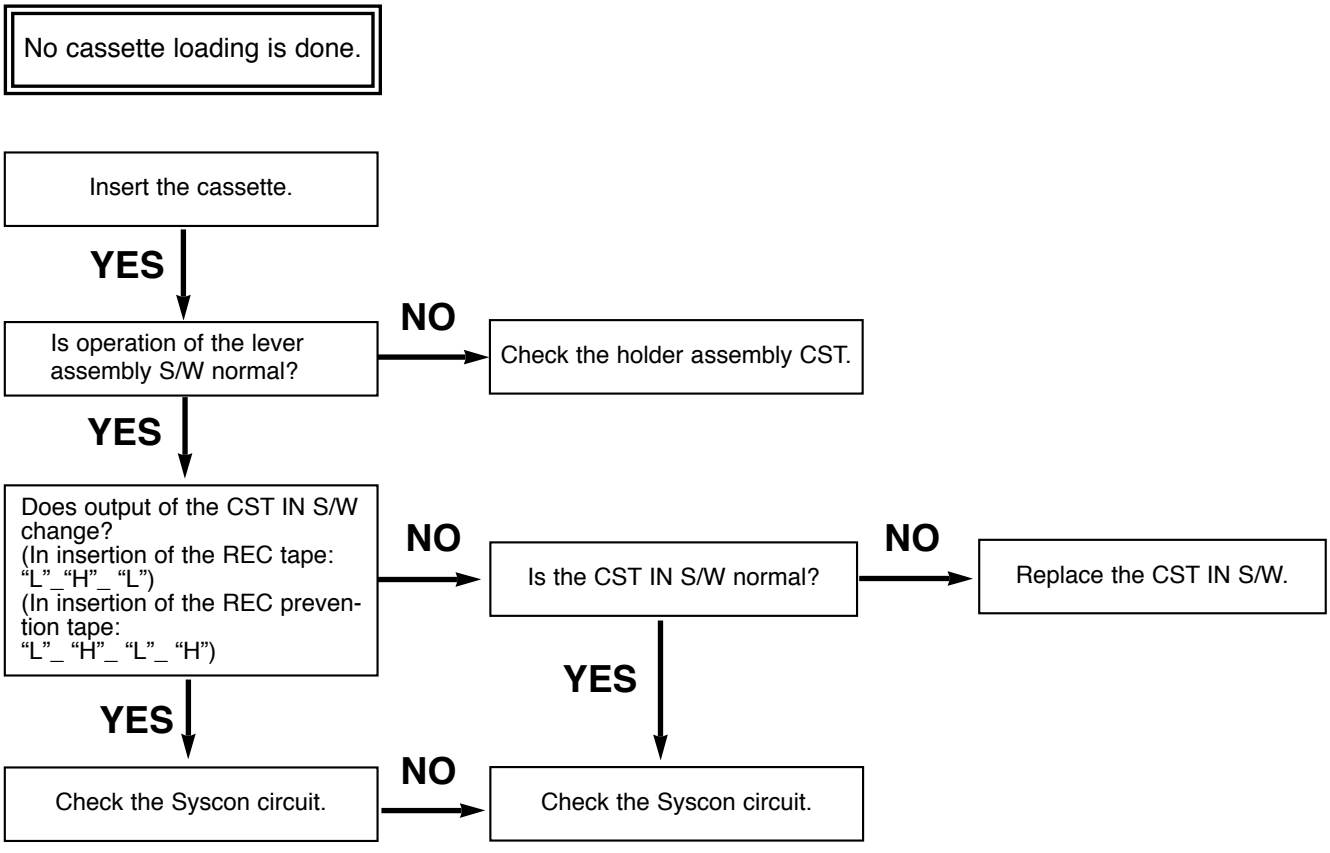
B.


No F/R operates.
YES
Is the current mode an F/R mode?
NO
Check the assembly position of the Mode S/W.
YES
Does the Capstan motor rotate?
NO
Is normal voltage applied at the Vcc1 and the Vcc2 of the Capstan motor?
YES
YES
Does the T/up and the supply reel Operate?
Is the Vctl terminal voltage of the Capstan Motor applied at more than 4V?
NO
Check the Servo, Power circuit.
YES
YES
Check the Syscon circuit.
Replace the Capstan motor.

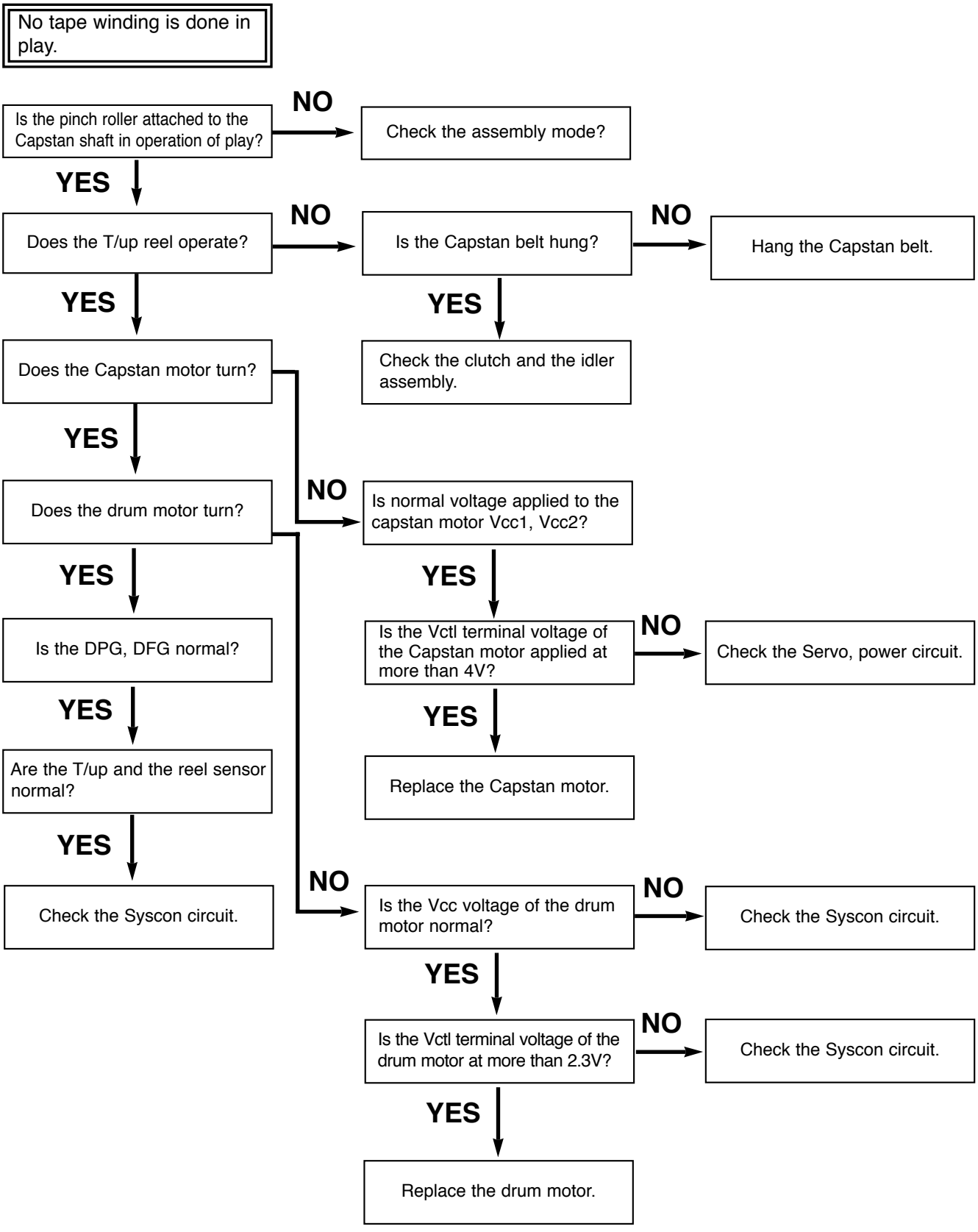
C.


Auto Stop operates.
(PLAY/CUE/REV)
Does the pinch roller attached to the Capstan shaft turn in operation of the Play/Cue/Rev.
NO
Check the assembly mode.
Check the spring pinch.
Is output of the DFG, DPG normal?
NO
Replace the drum motor.
YES
YES
Does the T/UP or the supply reel pulse occur?
NO
Check the Servo, Syscon.
YES
Check the Syscon, μ-com.
Replace the reel sensor.

D.

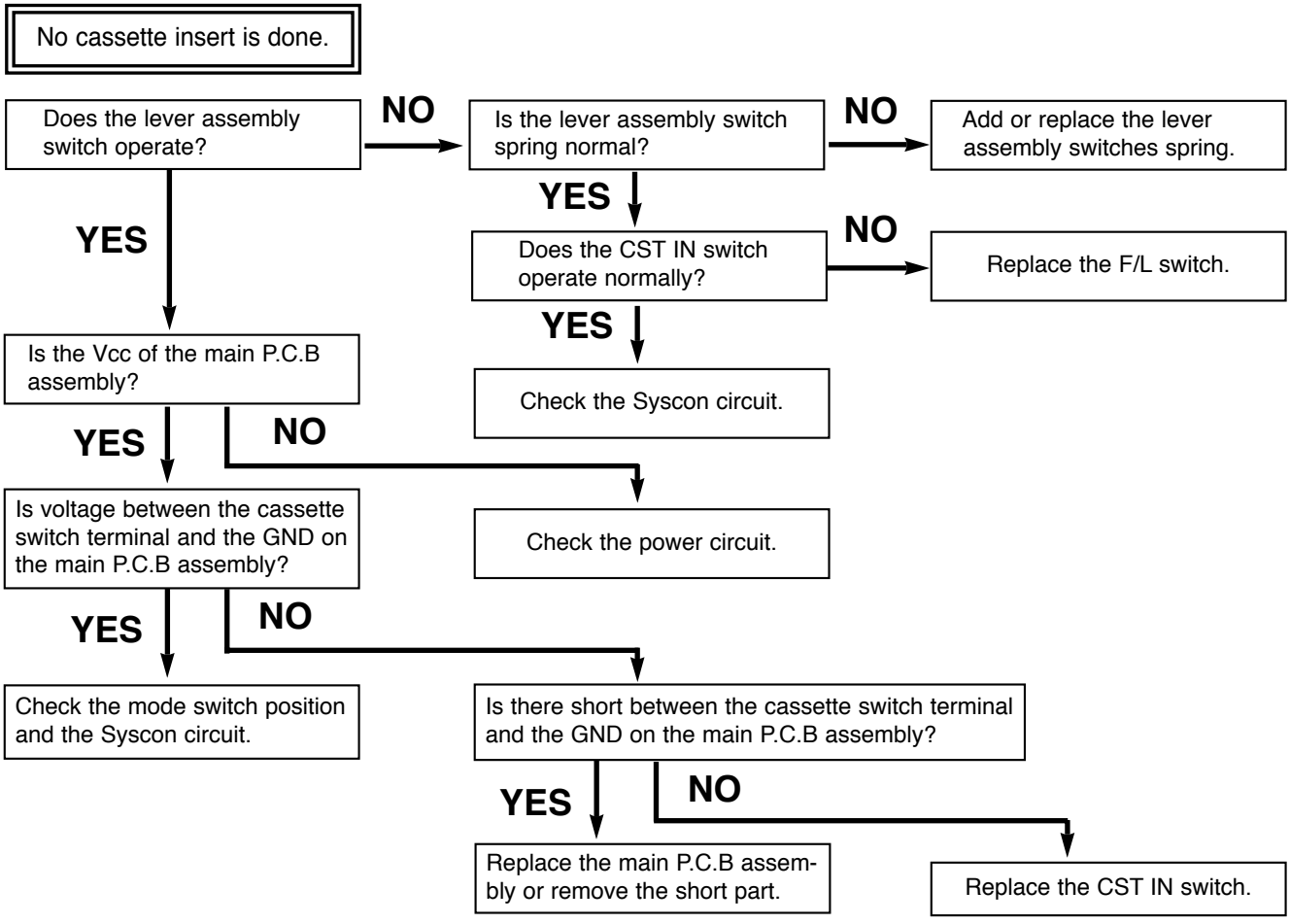

No cassette loading is done.
Insert the cassette.
YES
Is operation of the lever assembly S/W normal?
NO
Check the holder assembly CST.
YES
Does output of the CST IN S/W change?
(In insertion of the REC tape:
"L"_"H"_ "L")
(In insertion of the REC prevention tape:
"L"_ "H"_ "L"_ "H")
NO
Is the CST IN S/W normal?
NO
Replace the CST IN S/W.
YES
YES
Check the Syscon circuit.
NO
Check the Syscon circuit.

E.

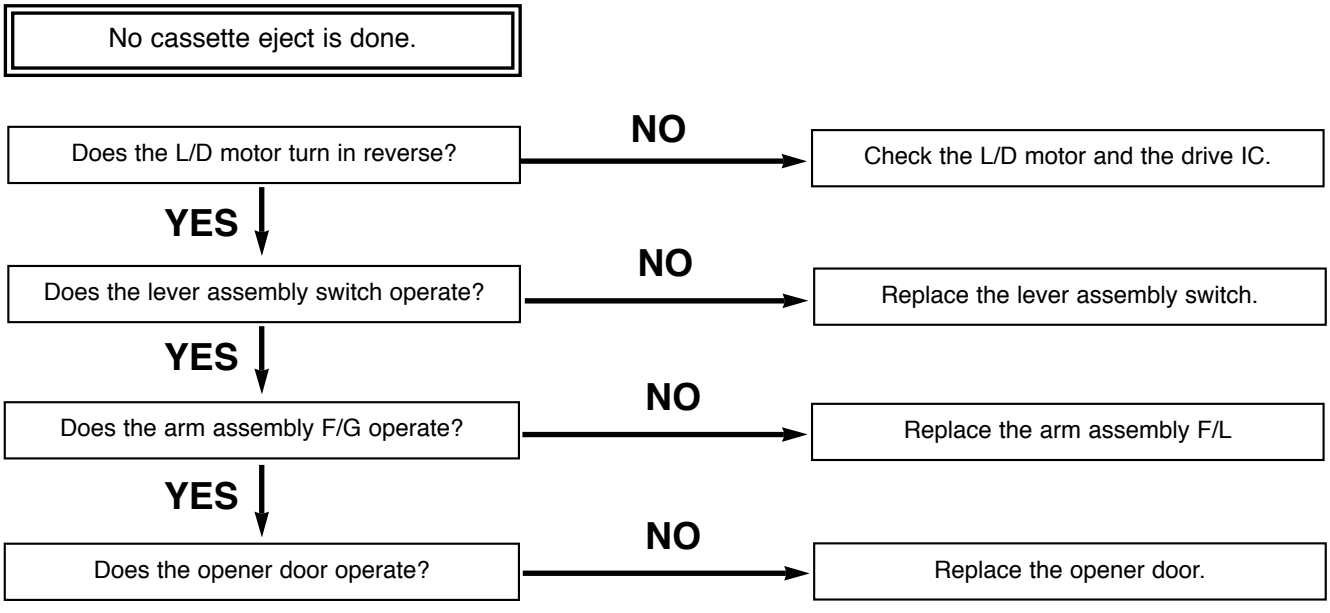

No tape winding is done in play.
Is the pinch roller attached to the Capstan shaft in operation of play?
NO
Check the assembly mode?
YES
Does the T/up reel operate?
NO
Is the Capstan belt hung?
NO
Hang the Capstan belt.
YES
YES
Check the clutch and the idler assembly.
Does the Capstan motor turn?
YES
Does the drum motor turn?
NO
Is normal voltage applied to the capstan motor Vcc1, Vcc2?
YES
YES
Is the DPG, DFG normal?
Is the Vctl terminal voltage of the Capstan motor applied at more than 4V?
NO
Check the Servo, power circuit.
YES
YES
Are the T/up and the reel sensor normal?
Replace the Capstan motor.
YES
NO
Check the Syscon circuit.
Is the Vcc voltage of the drum motor normal?
NO
Check the Syscon circuit.
YES
Is the Vctl terminal voltage of the drum motor at more than 2.3V?
NO
Check the Syscon circuit.
YES
Replace the drum motor.

2. Front Loading Mechanism

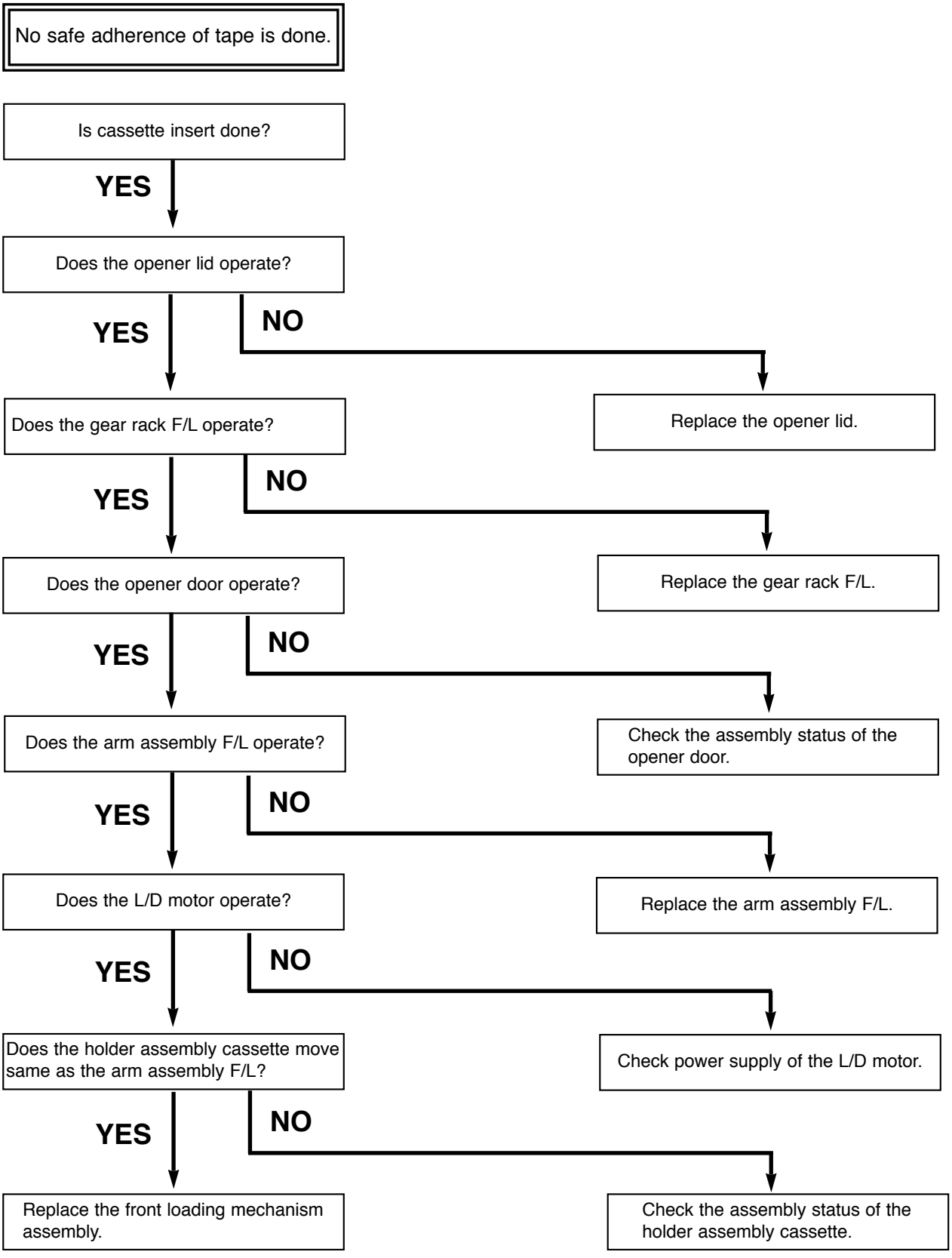
A.


No cassette insert is done.
Does the lever assembly switch operate?
NO
Is the lever assembly switch spring normal?
NO
Add or replace the lever assembly switches spring.
YES
YES
Does the CST IN switch operate normally?
NO
Replace the F/L switch.
YES
Is the Vcc of the main P.C.B assembly?
Check the Syscon circuit.
YES
NO
Is voltage between the cassette switch terminal and the GND on the main P.C.B assembly?
Check the power circuit.
YES
NO
Check the mode switch position and the Syscon circuit.
Is there short between the cassette switch terminal and the GND on the main P.C.B assembly?
YES
NO
Replace the main P.C.B assembly or remove the short part.
Replace the CST IN switch.

B.

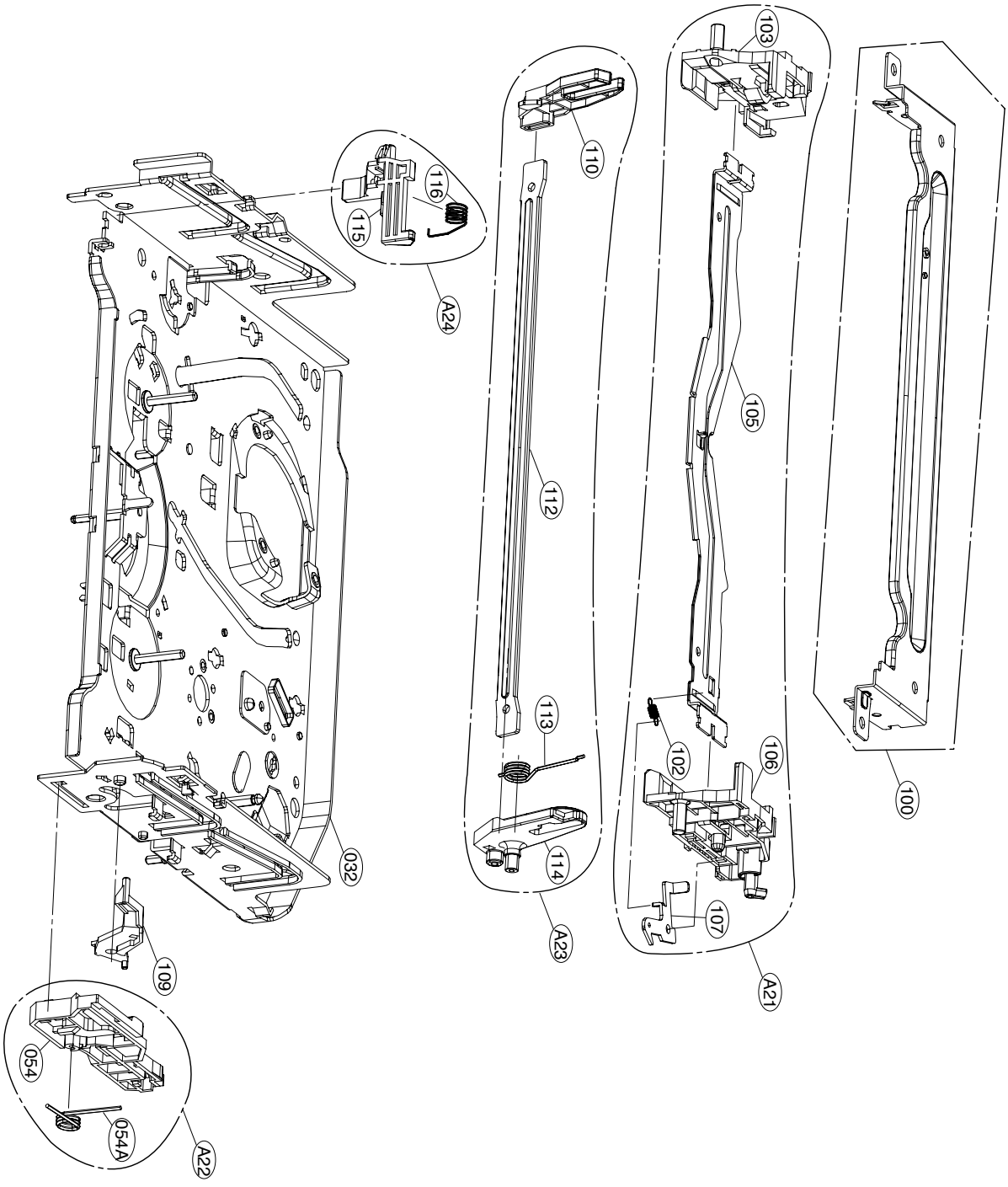


C.


No safe adherence of tape is done.
Is cassette insert done?
YES
Does the opener lid operate?
YES
NO
Replace the opener lid.
Does the gear rack F/L operate?
YES
NO
Replace the gear rack F/L.
Does the opener door operate?
YES
NO
Check the assembly status of the opener door.
Does the arm assembly F/L operate?
YES
NO
Replace the arm assembly F/L.
Does the L/D motor operate?
YES
NO
Check power supply of the L/D motor.
Does the holder assembly cassette move same as the arm assembly F/L?
YES
NO
Check the assembly status of the holder assembly cassette.
Replace the front loading mechanism assembly.

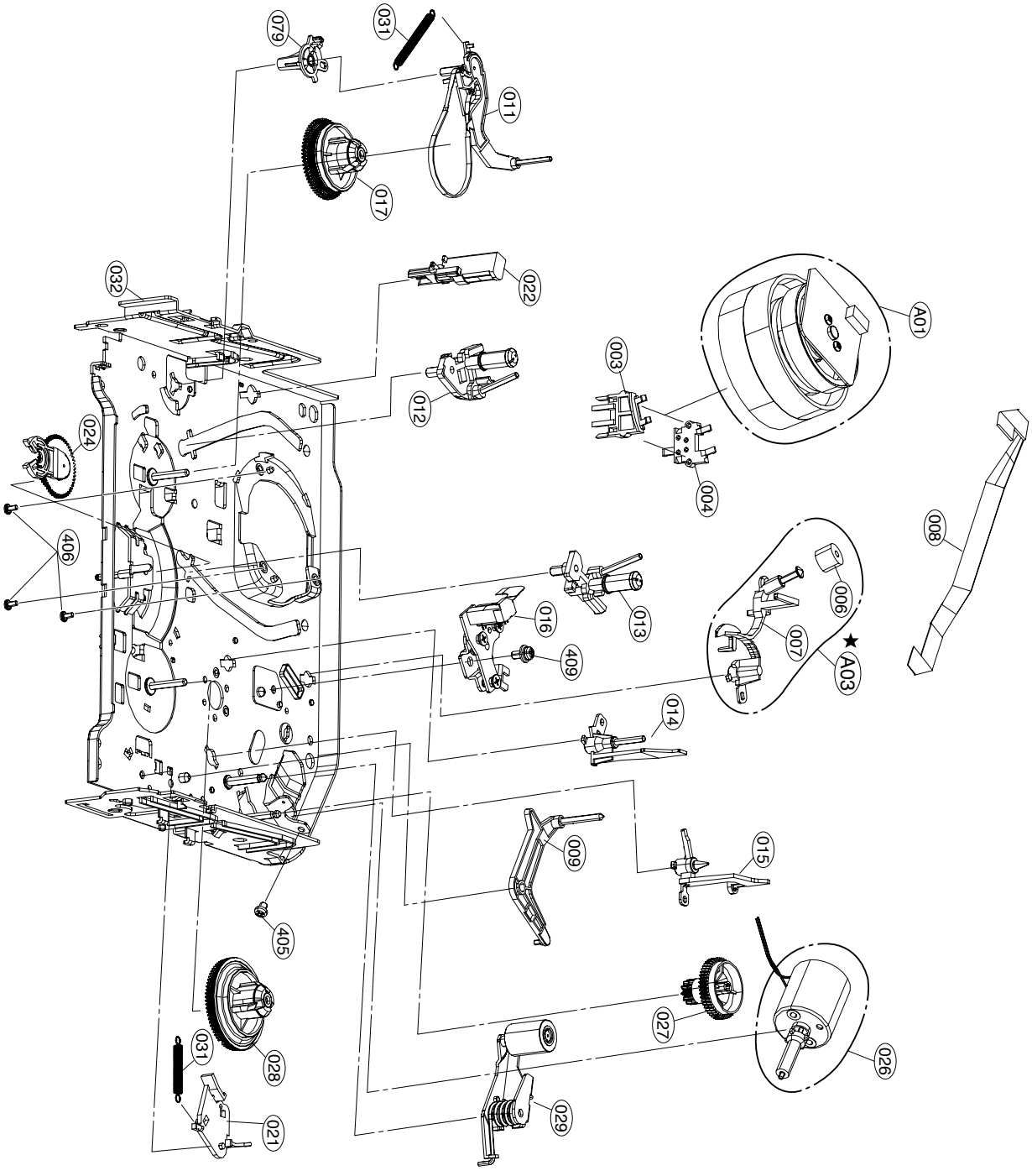
EXPLODED VIEWS

1. Front Loading Mechanism Section

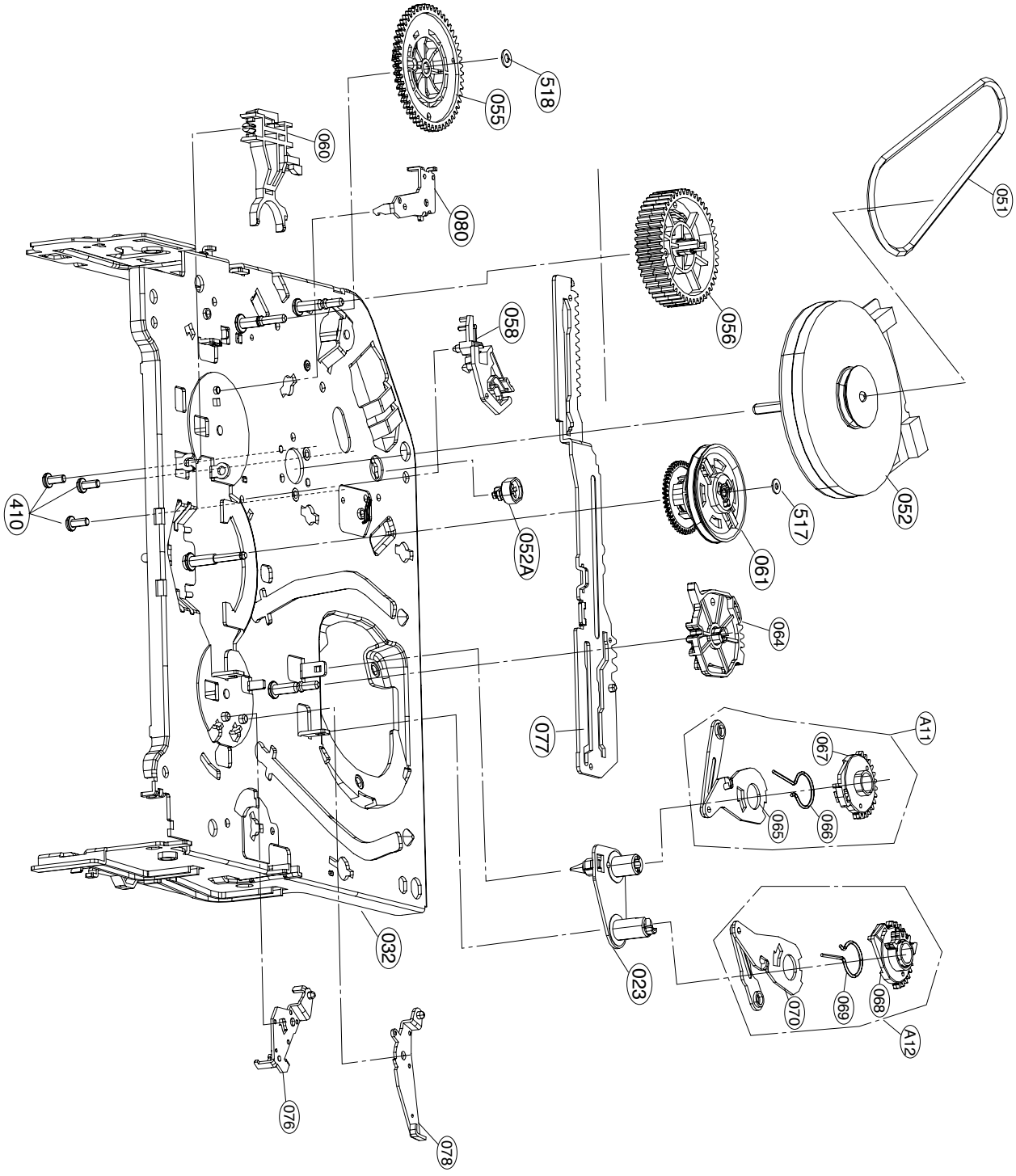


2. Moving Mechanism Section (1)

★ OPTIONAL PART



3. Moving Mechanism Section (2)



MEMO

NOTES) ⚠ Warning
Parts that are shaded are critical
With respect to risk of fire or
electricial shock.

SECTION 5 REPLACEMENT PARTS LIST

MODELS:(A)GD281S (B)GD981NS NA3FLL(LGEFS)

RUN DATE:16,JAN.2004

.MECHANICAL SECTION

NSP:Not Service Part

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
ASSEMBLY PARTS SECTION								
		A00	6721RF0911A	O		DECK ASSEMBLY,VIDEO	DECK/MECHA D37(M) DI (2HD, NP,	NSP
		A00	6721RF0951A		O	DECK ASSEMBLY,VIDEO	DECK/MECHA D37(M) DI (4HF, PAL	NSP
		A01	6723R-0601B	O		DRUM(CIRC) ASSEMBLY	DECK/MECHA (9M2) D37-2CH SP/EP	
		A01	6723R-0603F		O	DRUM(CIRC) ASSEMBLY	DECK/MECHA (9P6S) D37-6CH PAL	
		A03	4261R-0039A	O	O	ARM ASSEMBLY	DECK/MECHA CLEANER - D37	
		A11	4471R-0017A	O	O	GEAR ASSEMBLY	DECK/MECHA P3 - D37	
		A12	4471R-0015A	O	O	GEAR ASSEMBLY	DECK/MECHA P2 - D37	
		A21	4931R-0084A	O	O	HOLDER ASSEMBLY	DECK/MECHA CST - D37	
		A22	4471R-0016A	O	O	GEAR ASSEMBLY	DECK/MECHA RACK F/L - D37	
		A23	4261R-0038A	O	O	ARM ASSEMBLY	DECK/MECHA F/L - D37	
		A24	4511R-0004A	O	O	LEVER ASSEMBLY	SWIHCH(V) - D37	
PARTS SECTION								
		003	4930R-0376A		O	HOLDER	DECK/MECHA FPCB(6CH) - D35S, D	
		003	4930R-0468A	O		HOLDER	DECK/MECHA FPCB(2CH) - D35S,D3	
		004	5006R-0042A	O	O	CAP	DECK/MECHA FPCB - D35S, D37V O	
		006	4580R-0004A	O	O	ROLLER	CLEANER	NSP
		007	4260R-0053A	O	O	ARM	DECK/MECHA CLEANER MOLD - D37	NSP
		008	6850R-HG18Y	O	O	CABLE,FLAT	P=1.25 FFC UL2896(0.05X0.8) 7	
		009	4260R-0056A	O	O	ARM	DECK/MECHA T/UP OTHER - D37	
		011	4261R-0040A	O	O	ARM ASSEMBLY	DECK/MECHA TENSION - D37	
		012	3041R-M037A	O	O	BASE ASSEMBLY	P2 -D37	
		013	3041R-M038A	O	O	BASE ASSEMBLY	P3 - D37	
		014	3041R-M039A	O	O	BASE ASSEMBLY	P4 - D37	
		015	5870R-0007A	O	O	OPENER	DECK/MECHA LID OTHER - D37	
		016	3041R-M036A	O	O	BASE ASSEMBLY	A/C HEAD (ALPS) - D37	
		017	4408R-0005A	O	O	REEL	DECK/MECHA S OTHER - D37	
		021	4421R-M002A	O	O	BRAKE ASSEMBLY	T - D37	
		022	6520D00004A	O	O	HEAD(CIRC)	ST ST FE HEAD FOR D37	
		023	3040R-M056A	O	O	BASE	LOADING OTHER - D37	
		024	4261R-0041A	O	O	ARM ASSEMBLY	DECK/MECHA IDLER(H)	
		026	4681RF0039A	O	O	MOTOR ASSEMBLY	DECK/MECHA L/D - (DI) D37	
		027	4470R-0133A	O	O	GEAR	DECK/MECHA WHEEL OTHER - D37	
		028	4408R-0006A	O	O	REEL	DECK/MECHA T OTHER - D37	
		029	4261R-0037A	O	O	ARM ASSEMBLY	DECK/MECHA PINCH - D37	
		031	4970R-0175A	O	O	SPRING	COIL TENSION - D37	
		032	3141R-M002A	O	O	CHASSIS ASSEMBLY	D37	NSP
		051	4400R-0005A	O	O	BELT	CAPSTAN	
		052	4680R-A015A	O	O	MOTOR(MECH)	CAPSTAN F2QVB66 SANKYO FOR D37	
		052A	4980R-0029A	O	O	SUPPORTER	DECK/MECHA CAPSTAN OTHER - D37	
		054	4470R-0136A	O	O	GEAR	DECK/MECHA RACK F/L OTHER - D3	
		054A	4970R-0171A	O	O	SPRING	COIL RACK F/L - D37	

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		055	4470R-0140A	O	O	GEAR	DECK/MECHA DRIVE OTHER - D37	
		056	4470R-0139A	O	O	GEAR	DECK/MECHA CAM OTHER - D37	
		058	4421R-M001A		O	BRAKE ASSEMBLY	CAPSTAN -D37	
		060	4510R-0065A	O	O	LEVER	DECK/MECHA F/R OTHER - D37	
		061	4265R-0008A	O	O	CLUTCH ASSEMBLY	DECK/MECHA D37(M)	
		064	4470R-0141A	O	O	GEAR	DECK/MECHA SECTOR OTHER - D37	
		065	4261R-0044A	O	O	ARM ASSEMBLY	DECK/MECHA P3 - D37	NSP
		066	4970R-0122A	O	O	SPRING	COIL D35	NSP
		067	4470R-0135A	O	O	GEAR	DECK/MECHA P3 OTHER - D37	NSP
		068	4470R-0134A	O	O	GEAR	DECK/MECHA P2 OTHER - D37	NSP
		069	4970R-0122A	O	O	SPRING	COIL D35	NSP
		070	4261R-0043A	O	O	ARM ASSEMBLY	DECK/MECHA P2 - D37	NSP
		076	4510R-0063A	O	O	LEVER	DECK/MECHA SPRING OTHER - D37	
		077	3300R-M203A	O	O	PLATE	SLIDER OTHER - D37	
		078	4510R-0062A	O	O	LEVER	DECK/MECHA TENSION OTHER - D37	
		079	3040R-M057A	O	O	BASE	TENSION OTHER - D37	
		080	4510R-0064A	O	O	LEVER	DECK/MECHA BRAKE OTHER - D37	
		100	3300R-M202A	O	O	PLATE	TOP OTHER - D37	
		102	4970R-0173A	O	O	SPRING	COIL STOPPER - D37	
		103	4930R-0452A	O	O	HOLDER	DECK/MECHA SIDE (L) OTHER - D3	NSP
		105	4930R-0450A	O	O	HOLDER	DECK/MECHA CST OTHER - D37	NSP
		106	4930R-0451A	O	O	HOLDER	DECK/MECHA SIDE(R) OTHER - D37	NSP
		107	4510R-0061A	O	O	LEVER	DECK/MECHA STOPPER OTHER - D37	NSP
		109	5870R-0008A	O	O	OPENER	DECK/MECHA DOOR OTHER - D37	
		110	4260R-0051A	O	O	ARM	DECK/MECHA F/L(L) OTHER - D37	NSP
		112	3070R-0002A	O	O	BODY	F/L	NSP
		113	4970R-0169A	O	O	SPRING	COIL F/L(R) - D37	NSP
		114	4260R-0052A	O	O	ARM	DECK/MECHA F/L (R) OTHER - D37	NSP
		115	4510R-0060A	O	O	LEVER	DECK/MECHA SWITCH(V) OTHER - D	
		116	4970R-0163A	O	O	SPRING	COIL D35S SWITCH	
SCREW								
		405	1MPC0301499	O	O	SCREW MACHINE,PAN HEAD	D3.0 L4.0 SWRCH18A/FZY	
		406	1MEC0302018	O	O	PAN HEAD MACHINE SCREW S/W +	D 3.0 L 6.0 MSWR3/FZY	
		409	1SZZR-0032B	O	O	SCREW,DRAWING	+ 1 D2.6 L5.0 SWRCH18A/FZY TAP	
		410	1APF0262218	O	O	SCREW TAP TITE(B),PAN HEAD	D2.6 L6.8 MSWR3/FZY	
.CABINET & MAIN FRAME SECTION								
ASSEMBLY PARTS SECTION								
		A42	6871R-4871K		O	PWB(PCB) ASSEMBLY,TOTAL	8TOOL W/F.AV LEFT KEY DIEVNT	
		A43	3721R-F398E	O		PANEL ASSEMBLY,FRONT	VCR GD281S NA3FLL	
		A43	3721R-F398F		O	PANEL ASSEMBLY,FRONT	VCR GD981NS NA3FLL	
		A46	3501R-8870D		O	BOARD ASSEMBLY	VCR GD981NS DI	
		A46	3501R-8870E	O		BOARD ASSEMBLY	VCR PAL 2HD GD281S DI	
PARTS SECTION								
		250	3110R-V023A	O	O	CASE	V6 MAIN PRESS TOP A288G(520MM*	
		260	3210R-V010F	O	O	FRAME	V6 MAIN MOLD 60HR 86570B "B"	NSP
		261	3300R-V073A	O	O	PLATE	V6 MAIN PRESS TUNER GROUND	
		275	4930R-0381A	O	O	HOLDER	END(S)	
		280	3720R-F257E	O		PANEL,VIDEO	VCR GD281S NA3FLL MOLD	NSP
		280	3720R-F257F		O	PANEL,VIDEO	VCR GD981NS NA3FLL MOLD	NSP
		283	3580R-V091A	O	O	DOOR	VCR GC98 MOLD SLIM VCR	
		283	442-681A	O		SPRING	DOOR	
		284	442-681A		O	SPRING	DOOR	
⚠		300	6410RCHV02A	O	O	POWER CORD	H03VVH2-F2 X 0.75MM FILTER VOL	
		320	3720R-D107B	O		PANEL,VIDEO	VCR V6(2SCART) MONO MOLD DISTR	

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		320	3720R-D107B		O	PANEL,VIDEO	VCR V6(2SCART) MONO MOLD DISTR	
		323	3300R-V081A	O		PLATE	V7 PRESS PRE AMP	
		323	3300R-V081A		O	PLATE	V7 PRESS PRE AMP	
		330	3550R-4109A	O	O	COVER	VCR V6 MAIN PRESS BOTTOM	
SCREW								
		452	353-051A	O	O	SCREW,DRAWING	SPECIAL	
		457	353-051E	O	O	SCREW,DRAWING	SPECIAL (3X12)	
		462	353-136D	O	O	SCREW,DRAWING	+ 2 D4.0 L12.5 MSWR3/FN (SILVE	
		517	1WZZR-0004D	O	O	WASHER,DRAWING	STOPPER	
		518	1WZZR-0004A	O	O	WASHER,DRAWING	STOPPER	
.PACKING & ACCESSORY SECTION								
		801	3835RV0007H	O	O	INSTRUCTION ASSEMBLY	VCR GD981NS.NA3FLL_LGEFS ENG/F	
		802	3890R-C073G		O	BOX	GD981NS NA3FLL DW2 LGEFS-MG64	
		802	3890R-C073Q	O		BOX	GD281S NA3FLL DW2 MG24	
		803	3920R-E100A	O	O	PACKING,CASING	GC690(V6) 0.02 80 EPS 5 1394 2	
		804	292-053A	O	O	BAG	SOFT(VCP)	NSP
		808	534-008C	O	O	BATTERY,MANGANESE	AAAM(R03) SEOTONG 1-5 V - 1PA	
		810	6851R-0054B	O	O	CABLE ASSEMBLY	PAL RF 1.2M FREE OF CD_PB_HG H	
.REMOTE CONTROL SECTION								
		900	6711R1P073B	O	O	REMOTE CONTROLLER ASSEMBLY	V1 GC230W LG W/SHOWVIEW	

.ELECTRICAL SECTION

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		BD101	0DD160000DA	O	O	DIODE,RECTIFIERS	S1WBA60 BK SHINDENGEN - 600V -	
⚠		C101	624-088L	O	O	CAPACITOR,DRAWING	435D SUNIL ELECTRONICS 0.1UF/2	
⚠		C102	624-088L	O	O	CAPACITOR,DRAWING	435D SUNIL ELECTRONICS 0.1UF/2	
		C103	0CE686CU611	O	O	CAPACITOR,AL.ELECTROLYTIC	68UF SHL,SD 400V M FL BK7.5	
		C105	0CQ1031Y519	O	O	CAPACITOR,FIXED FILM	0.01UF D 630V 10% PE NI TP5	
		C106	624-087B	O	O	CAPACITOR	HIGH-VOL 100P/1KV SMPS SAMHWA	
		C109	0CE1064K638	O	O	CAPACITOR,FIXED ELECTROLYTIC	10M SRA 50V M FM5 TP(5)	
⚠		C112	0CG3320U630	O	O	CAPACITOR,SEMI CERAMIC	3300 PF 400V M E R(NK,AD,SD)	
⚠		C113	0CG3310U510	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	330PF D 400V 10% B(Y5P) R	
		C114	0CQ4732K409	O	O	CAPACITOR,FIXED FILM	0.047UF S 50V 5% PE TP5	
		C115	624-085D	O	O	CAPACITOR	CE 47UF/50V KME (SMPS)	
		C116	0CE108BF630	O	O	CAPACITOR,FIXED ELECTROLYTIC	1000UF KME 16V M FM5 BULK	
		C117	624-082H	O	O	CAPACITOR	CE 1000UF/10V SHL(10*12.5)T/P	
		C120	0CE477BH630	O	O	CAPACITOR,AL.ELECTROLYTIC	470UF KME TYPE 25V M FM5 BULK	
		C121	0CE227CH618	O	O	CAPACITOR,FIXED ELECTROLYTIC	220UF SHL,SD 25V 20% FL TP 5	
		C123	0CE337BJ610	O	O	CAPACITOR,FIXED ELECTROLYTIC	330UF KME TYPE 35V 20% FL BULK	
		C127	0CN223AK948	O	O	CAPACITOR,TUBULAR(HIGH DIELEC)	0.022UF 50V Z F TA26 S	
		C135	0CN4710K518	O	O	CAPACITOR TUBULA(HIGH DIELE)	470P 50V K B TA26	
		C153	0CE1064F638	O	O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C156	0CE4764J638	O	O	CAPACITOR,AL.ELECTROLYTIC	47UF SRA,SS 35V M FM5 TP 5	
		C201	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C202	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C203	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C204	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C205	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C206	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C207	0CE4744K638	O	O	CAPACITOR,ELECTROLYTIC	0.47M SRA 50V M FM5 TP(5)	
		C208	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C209	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C210	0CE4744K638	O	O	CAPACITOR,ELECTROLYTIC	0.47M SRA 50V M FM5 TP(5)	
		C211	0CH1222K512	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	2200PF 50V K B 1608 R/TP	
		C212	0CH1222K512	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	2200PF 50V K B 1608 R/TP	
		C213	0CE2254K638	O	O	CAPACITOR,FIXED ELECTROLYTIC	2.2UF SRA,SS 50V 20% FM5 TP 5	
		C214	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C215	0CE4764F638	O	O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C216	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C301	0CE4754K638	O	O	CAPACITOR,FIXED ELECTROLYTIC	4.7UF SRA,SS 50V 20% FM5 TP 5	
		C302	0CE2264F638	O	O	CAPACITOR,FIXED ELECTROLYTIC	22UF SRA,SS 16V 20% FM5 TP 5	
		C303	0CH1122K562	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	1200PF 50V 10% X7R(X) 1608 R/T	
		C304	0CE4764F638	O	O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C305	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C306	0CH1122K562	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	1200PF 50V 10% X7R(X) 1608 R/T	
		C307	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C308	0CQ1531N409	O	O	CAPACITOR,FIXED FILM	0.015UF D 100V 5% PE TP5	
		C309	0CH4121K412	O	O	CAPACITOR,CHIP[CERAMIC M/L TC	120P 50V J COG 1.6X0.8 R/TP	
		C310	0CN2210K518	O	O	CAPACITOR TUBULA(HIGH DIELE)	220P 50V K B TA26	
		C311	0CE4764F638	O	O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C312	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C314	0CE2264F638	O	O	CAPACITOR,FIXED ELECTROLYTIC	22UF SRA,SS 16V 20% FM5 TP 5	
		C315	0CE2253K636	O	O	CAPACITOR,FIXED ELECTROLYTIC	2.2UF SRE,SE 50V 20% FM5 BP(D)	
		C316	0CE1064F638	O	O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C317	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C318	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		C319	0CQ1032K409	O	O	CAPACITOR,FIXED FILM	0.01UF S 50V 5% PE TP5	
		C320	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C321	0CH4680K412	O	O	CAPACITOR,FIXED CERAMIC(HIGH D	68PF 50V 5% NP0 1608 R/TP	
		C322	0CE1064F638	O	O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C323	0CE1064F638	O	O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C324	0CE4754K638	O	O	CAPACITOR,FIXED ELECTROLYTIC	4.7UF SRA,SS 50V 20% FM5 TP 5	
		C325	0CE1064F638	O	O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C326	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C327	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C328	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C329	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C330	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C331	0CE1064F638	O	O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C333	0CE4764F638	O	O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C334	0CH1473K516	O	O	CHIP CAPA CERAMIC M/L H.D F/S	0.047U 50V K X7R 2.0X1.2 R/TP	
		C335	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C336	0CE4764F638	O	O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C337	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C338	0CH1473K516	O	O	CHIP CAPA CERAMIC M/L H.D F/S	0.047U 50V K X7R 2.0X1.2 R/TP	
		C339	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C340	0CH1473K516	O	O	CHIP CAPA CERAMIC M/L H.D F/S	0.047U 50V K X7R 2.0X1.2 R/TP	
		C341	0CH1223K942	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.022UF 50V Z Y5V(F) 1508 R/TP	
		C342	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C343	0CH1473K516	O	O	CHIP CAPA CERAMIC M/L H.D F/S	0.047U 50V K X7R 2.0X1.2 R/TP	
		C344	0CH4101K412	O	O	CHIP CAPA CERAMIC M/L T.C F/S	100P 50V J COG 1.6X0.8 R/TP	
		C345	0CH1333K562	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.033UF 50V K X7R(X) 1508 R/TP	
		C346	0CE4764F638	O	O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C347	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C348	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C349	0CE4764F638	O	O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C350	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C353	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C355	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C356	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C357	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C358	0CH4680K412	O	O	CAPACITOR,FIXED CERAMIC(HIGH D	68PF 50V 5% NP0 1608 R/TP	
		C359	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C360	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C361	0CH1223K942	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.022UF 50V Z Y5V(F) 1508 R/TP	
		C362	0CE1064F638	O	O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C363	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C364	0CE4764F638	O	O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C365	0CE1064F638	O	O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C366	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C367	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C368	0CQ8224K409	O	O	CAPACITOR,FIXED FILM	0.0082UF TE 50V 5% PE TP5	
		C369	0CH4101K412	O	O	CHIP CAPA CERAMIC M/L T.C F/S	100P 50V J COG 1.6X0.8 R/TP	
		C370	0CH4820K416	O	O	CAPA,CHIP CERAMIC M/L T.C F/S	82P 50V J COG 2.0X1.2 R/TP	
		C371	0CH4820K416	O	O	CAPA,CHIP CERAMIC M/L T.C F/S	82P 50V J COG 2.0X1.2 R/TP	
		C372	0CH4820K416	O	O	CAPA,CHIP CERAMIC M/L T.C F/S	82P 50V J COG 2.0X1.2 R/TP	
		C373	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C375	0CH1102K512	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C376	0CH1102K512	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C500	0CE4775C638	O	O	CAPACITOR,FIXED ELECTROLYTIC	470UF SR,SV 6.3V 20% FM5 TP 5	

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		C501	0CH1104K942	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.1UF 50V Z Y5V(F) 1508 R/TP	
		C502	0CE4764F638	O	O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C503	0CE2274C638	O	O	CAPACITOR,ELECTROLYTIC	220M SRA 6.3V M FM5 TP(5)	
		C504	0CE2274C638	O	O	CAPACITOR,ELECTROLYTIC	220M SRA 6.3V M FM5 TP(5)	
		C505	0CE4764F638	O	O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C506	0CH1223K942	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.022UF 50V Z Y5V(F) 1508 R/TP	
		C508	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C509	0CC2200K415	O	O	CAPACITOR,CERAMIC(TEMP COMP)	22P 50V J NP0 TS	
		C510	0CE2274C638	O	O	CAPACITOR,ELECTROLYTIC	220M SRA 6.3V M FM5 TP(5)	
		C511	0CH1104K942	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.1UF 50V Z Y5V(F) 1508 R/TP	
		C512	0CH1102K512	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C513	0CH1102K512	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C514	0CC1200K415	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	12PF D 50V 5% TR NP0	
		C515	0CC1500K415	O	O	CAPACITOR,CERAMIC(TEMP COMP)	15P 50V J NP0 TS	
		C518	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C519	0CH1104K942	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.1UF 50V Z Y5V(F) 1508 R/TP	
		C523	0CE2254K638	O	O	CAPACITOR,FIXED ELECTROLYTIC	2.2UF SRA,SS 50V 20% FM5 TP 5	
		C524	0CE4764F638	O	O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C525	0CE2274C638	O	O	CAPACITOR,ELECTROLYTIC	220M SRA 6.3V M FM5 TP(5)	
		C526	0CE4764J638	O	O	CAPACITOR,AL.ELECTROLYTIC	47UF SRA,SS 35V M FM5 TP 5	
		C527	0CH4221K412	O	O	CAPACITOR,CHIP[CERAMIC M/L TC	220P 50V J COG 1.6X0.8 R/TP	
		C533	0CH1102K512	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C534	0CE4754K638	O	O	CAPACITOR,FIXED ELECTROLYTIC	4.7UF SRA,SS 50V 20% FM5 TP 5	
		C535	0CE4754K638	O	O	CAPACITOR,FIXED ELECTROLYTIC	4.7UF SRA,SS 50V 20% FM5 TP 5	
		C543	0CH1222K512	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	2200PF 50V K B 1608 R/TP	
		C544	0CH1473H942	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0470UF 25V Z Y5V(F) 1608 R/T	
		C545	0CH1333K562	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.033UF 50V K X7R(X) 1508 R/TP	
		C546	0CE4764J638	O	O	CAPACITOR,AL.ELECTROLYTIC	47UF SRA,SS 35V M FM5 TP 5	
		C547	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C551	0CH1333K562	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.033UF 50V K X7R(X) 1508 R/TP	
		C552	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C564	0CH1102K512	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C567	0CH1102K512	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C570	0CC1500K415	O	O	CAPACITOR,CERAMIC(TEMP COMP)	15P 50V J NP0 TS	
		C571	0CC1500K415	O	O	CAPACITOR,CERAMIC(TEMP COMP)	15P 50V J NP0 TS	
		C575	0CH1102K512	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C576	0CC2700K415	O	O	CAPACITOR CERAMIC(TEMP COMP)	27P 50V J NP0 TP	
		C577	0CH1223K942	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.022UF 50V Z Y5V(F) 1508 R/TP	
		C578	0CH1222K512	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	2200PF 50V K B 1608 R/TP	
		C581	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C582	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C583	0CH1104K942	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.1UF 50V Z Y5V(F) 1508 R/TP	
		C589	0CQ2232K409	O	O	CAPACITOR,FIXED FILM	0.022UF S 50V 5% PE TP5	
		C596	0CH1104K942	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.1UF 50V Z Y5V(F) 1508 R/TP	
		C5A3	0CH1104K942	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.1UF 50V Z Y5V(F) 1508 R/TP	
		C5A4	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C5A5	0CE1054K638	O	O	CAPACITOR,ELECTROLYTIC	1.0M SRA/SS50V M FM5 TP(5)	
		C5G2	0CE108CC638	O	O	CAPACITOR,FIXED ELECTROLYTIC	1000UF SHL,SD 6.3V 20% FM5 TP	
		C5P1	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C5P2	0CH1103K512	O	O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C5R1	0CE3364F638	O	O	CAPACITOR,ELECTROLYTIC	33M SRA 16V M FM5 TP(5)	
		C5R2	0CH4681K412	O	O	CAPACITOR,FIXED CERAMIC(High d	680PF 50V 5% NP0 1608 R/TP	
		C5S1	0CH4430K416	O	O	CAPACITOR,FIXED CERAMIC(High d	43PF 50V J NP0 2012 R/TP	
		C5S3	0CH1223K942	O	O	CAPACITOR,CHIP[CERAMIC M/L HD	0.022UF 50V Z Y5V(F) 1508 R/TP	

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		C701	0CE4754K638	O	O	CAPACITOR,FIXED ELECTROLYTIC	4.7UF SRA,SS 50V 20% FM5 TP 5	
		C703	0CE1064F638	O	O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C704	0CE4764F638	O	O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C705	0CH1103K562	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.01UF 50V 10% X7R(X) 1608 R/T	
		C706	0CH1103K562	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.01UF 50V 10% X7R(X) 1608 R/T	
		C710	0CH4680K412	O	O	CAPACITOR,FIXED CERAMIC(HIGH D	68PF 50V 5% NP0 1608 R/TP	
		C711	0CH4330K412	O	O	CAPACITOR,CHIP[CERAMIC M/L TC	33P 50V J COG 1.6X0.8 R/TP	
		C713	0CE4776C638	O	O	CAPACITOR,AL.ELECTROLYTIC	470U SMS 6.3V M FM5 TP(5)	
		C714	0CH1103K562	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.01UF 50V 10% X7R(X) 1608 R/T	
		C751	0CE4764F638		O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C752	0CH1103K562		O	CAPACITOR,FIXED CERAMIC(Temp.c	0.01UF 50V 10% X7R(X) 1608 R/T	
		C753	0CH4560K412		O	CAPA,CHIP CERAMIC M/L T.C F/S	56P 50V J COG 1.6X0.8 R/TP	
		C754	0CH4560K412		O	CAPA,CHIP CERAMIC M/L T.C F/S	56P 50V J COG 1.6X0.8 R/TP	
		C755	0CE4764F638		O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C756	0CH1103K562		O	CAPACITOR,FIXED CERAMIC(Temp.c	0.01UF 50V 10% X7R(X) 1608 R/T	
		C757	0CE4764F638		O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C758	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C759	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C760	0CH1103K562		O	CAPACITOR,FIXED CERAMIC(Temp.c	0.01UF 50V 10% X7R(X) 1608 R/T	
		C761	0CH1103K562		O	CAPACITOR,FIXED CERAMIC(Temp.c	0.01UF 50V 10% X7R(X) 1608 R/T	
		C762	0CH1102K512		O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C764	0CH1392K562		O	CAPACITOR,FIXED CERAMIC(Temp.c	3900PF 50V K Z5U(E) 1608 R/TP	
		C765	0CH1392K562		O	CAPACITOR,FIXED CERAMIC(Temp.c	3900PF 50V K Z5U(E) 1608 R/TP	
		C766	0CE3354K638		O	CAPACITOR,FIXED ELECTROLYTIC	3.3UF SRA,SS 50V 20% FM5 TP 5	
		C769	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C770	0CH1473F562	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	47000PF 16V 10% X7R(X) 1608 R/	
		C771	0CH1103K562		O	CAPACITOR,FIXED CERAMIC(Temp.c	0.01UF 50V 10% X7R(X) 1608 R/T	
		C772	0CC0500K015		O	CAPACITOR,CERAMIC(TEMP COMP)	5P 50V C NP0 TR	
		C773	0CC0800K015		O	CAPACITOR CERAMIC(TEMP COMP)	8P 50V C NP0 TS	
		C790	0CH1103K562	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.01UF 50V 10% X7R(X) 1608 R/T	
		C7S1	0CE3364F638	O	O	CAPACITOR,ELECTROLYTIC	33M SRA 16V M FM5 TP(5)	
		C801	0CH1104K512		O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C805	0CH1104K512		O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C806	0CE4754K638		O	CAPACITOR,FIXED ELECTROLYTIC	4.7UF SRA,SS 50V 20% FM5 TP 5	
		C807	0CE4754K638		O	CAPACITOR,FIXED ELECTROLYTIC	4.7UF SRA,SS 50V 20% FM5 TP 5	
		C808	0CH1104K512		O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C809	0CH1104K512		O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C810	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C811	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C813	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C814	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C817	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C818	0CE4754K638		O	CAPACITOR,FIXED ELECTROLYTIC	4.7UF SRA,SS 50V 20% FM5 TP 5	
		C819	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C820	0CQ6822K409		O	CAPACITOR,FIXED FILM	6800PF S 50V 5% PE TP5	
		C821	0CE4764F638		O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C822	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C823	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C824	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C825	0CE4764F638		O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C826	0CQ6822K409		O	CAPACITOR,FIXED FILM	6800PF S 50V 5% PE TP5	
		C827	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C828	0CE4764F638		O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C829	0CH1103K512		O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		C830	0CH1104K512		O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C831	0CH1103K512		O	CAPA,CHIP CERAMIC M/L H.D F/S	0.0100UF 50V K B 1608 R/TP	
		C832	0CE4764F638		O	CAPACITOR,ELECTROLYTIC	47M SRA/SS 16V M FM5 TP(5)	
		C835	0CE4744K638		O	CAPACITOR,ELECTROLYTIC	0.47M SRA 50V M FM5 TP(5)	
		C901	0CH1102K512	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C902	0CE477CF638	O	O	CAPACITOR,AL.ELECTROLYTIC	470UF SHL TYPE 16V M FM5 TP 5	
		C903	0CH1102K512	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C904	0CH1102K512	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C908	0CH1102K512	O	O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C909	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C912	0CE477CF638	O	O	CAPACITOR,AL.ELECTROLYTIC	470UF SHL TYPE 16V M FM5 TP 5	
		C915	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C917	0CH4270K412	O	O	CAPACITOR,CHIP[CERAMIC M/L TC	27PF 50V J NP0 1608 R/TP	
		C920	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C921	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C957	0CH4270K412	O	O	CAPACITOR,CHIP[CERAMIC M/L TC	27PF 50V J NP0 1608 R/TP	
		C960	0CH1104K512	O	O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C961	0CE1064F638	O	O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C962	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C963	0CE1064F638		O	CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C9C1	0CE4754K638	O		CAPACITOR,FIXED ELECTROLYTIC	4.7UF SRA,SS 50V 20% FM5 TP 5	
		C9C2	0CE4754K638	O		CAPACITOR,FIXED ELECTROLYTIC	4.7UF SRA,SS 50V 20% FM5 TP 5	
		C9F1	0CH1102K512		O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C9F2	0CH1102K512		O	CAPACITOR,FIXED CERAMIC(TEMP.C	1000PF 50V 10% B(5YP) 1608 R/T	
		C9F3	0CH1104K512		O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C9F4	0CH1104K512		O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C9F5	0CH1104K512		O	CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C9M1	0CH1104K512	O		CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C9M3	0CH1104K512	O		CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C9M4	0CH1104K512	O		CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C9M5	0CH1104K512	O		CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C9M6	0CE1064F638	O		CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C9M7	0CE1064F638	O		CAPACITOR,ELECTROLYTIC	10M SRA 16V M FM5 TP(5)	
		C9M8	0CH1104K512	O		CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		C9M9	0CH1104K512	O		CAPACITOR,FIXED CERAMIC(Temp.c	0.1UF 50V 10% B(5YP) 1608 R/TP	
		CS501	6600M000026	O	O	SWITCH,PUSH	MPU12970MLB0 VCR CST IN S/W MI	
		D102	0DD010009CA	O	O	DIODE,RECTIFIERS	EG01C TP SANKEN - - - - - -	
		D103	0DR180209AA	O	O	DIODE,RECTIFIERS	ERA18-02KFRB TP FUJI DO204AL 2	
		D104	0DD133009AA	O	O	DIODE,SWITCHING	1SS133 DETECT,SW TP	
		D105	0DR104009BA	O	O	DIODE,RECTIFIERS	RL104F TP RECTRON - 400V 1A 30	
		D106	0DR158220AA	O	O	DIODE,RECTIFIERS	1N5822 BK RECTRON DO201AD 40V	
		D109	0DR202000AB	O	O	DIODE,RECTIFIERS	HER202 BK RECTRON - 100V 2A 60	
		D110	0DR104009BA	O	O	DIODE,RECTIFIERS	RL104F TP RECTRON - 400V 1A 30	
		D154	874-000T	O	O	WIRE,JUMP	D=0.6 ROLL	
		D155	0DD207000AB	O	O	DIODE,RECTIFIERS	2A07 2A RECT(T/S)P=12.5 F DELT	
		D156	0DD133009AA	O	O	DIODE,SWITCHING	1SS133 DETECT,SW TP	
		D159	0DD133009AA	O	O	DIODE,SWITCHING	1SS133 DETECT,SW TP	
		D160	0DD133009AA	O	O	DIODE,SWITCHING	1SS133 DETECT,SW TP	
		D301	0DD133009AA	O	O	DIODE,SWITCHING	1SS133 DETECT,SW TP	
		D502	0DD133009AA	O	O	DIODE,SWITCHING	1SS133 DETECT,SW TP	
		D509	0DD133009AA	O	O	DIODE,SWITCHING	1SS133 DETECT,SW TP	
		D902	0DD133009AA	O	O	DIODE,SWITCHING	1SS133 DETECT,SW TP	
		D9M1	0DD133009AA	O	O	DIODE,SWITCHING	1SS133 DETECT,SW TP	
		D9M2	0DD133009AA	O	O	DIODE,SWITCHING	1SS133 DETECT,SW TP	

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		ES501	4931R-0078C	O	O	HOLDER ASSEMBLY	VCR DECK/MECHA END(S)	
		ES502	4931R-0078C	O	O	HOLDER ASSEMBLY	VCR DECK/MECHA END(S)	
⚠		F101	0FS1601B51D	O	O	FUSE,SLOW BLOW	1600MA 250 V 5.2X20 CY/GL KS/J	
		F102	GIRH200000B	O	O	IC,ROHM	ICP-N20 T104 TP IC DETACT	
		FH01	586-008B	O	O	HOLDER	FUSE CLIP TP SINSUNG	
		FH02	586-008B	O	O	HOLDER	FUSE CLIP TP SINSUNG	
⚠		IC101	0IPMGSK003A	O	O	IC,POWER MANAGEMENT	STR-A6351 SANKEN 8 DIP ST SMPS	
⚠		IC102	657-063A	O	O	SENSOR	LTV-817B,PHOTO COUPLER(LITEON)	
		IC103	0IKE431000A	O	O	IC,KEC	KIA431 3 PIN TP	
		IC201	0ILNRSA007A	O	O	IC,LINEAR	LA70100M SANYO 30 SOP ST SECAM	
		IC301	0ILNRSA005B	O	O	IC,LINEAR	LA71750EM SANYO 100PIN QFP TRA	
		IC501	0IMCRHI036A	O	O	IC,MICRO CONTROLLER	HD643219SA38F HITACHI 112PIN Q	
		IC503	0ICS241600B	O	O	IC,CATALYST	CAT24WC16P 8P DIP ST 16K SERIA	
		IC504	0IKE703100A	O	O	IC,KEC	KIA7031P 3P 3.1V RESET(TAPING)	
		IC505	0IKE704200B	O	O	IC,KEC	KIA7042P 3P 4.2V RESET(TAPING)	
		IC751	0IIT341700C		O	IC,ITT	MSP3417G-QG-B8-V3 44 QFP TRAY	
		IC801	0IPH960500A		O	IC,PHILIPS	TDA9605H QFP44 BK HIFI AMP+HIF	
		IC901	0IPRPMT007A	O		IC,PERIPHERALS	MM1231XF MITSUMI 16PIN SOP ST	
		JK901	6612M00006A	O	O	JACK,SCART	DSAM-0341 DOOWON	
		JK9F3	6612J00053A		O	JACK,RCA	DPAE-0385 DOOWON RGB 2004 CO	
		L101	636-004C	O	O	FILTER(CIRC),EMC	BEAD CORE BFS3550R2FD8,R T/P	
⚠		L102	6200JB8012B	O	O	FILTER(CIRC),EMC	SQ2116 FEELUX BK 25MH	
		L103	6140R-C011A	O	O	COIL,RF	CHOKE COIL TDK 22UH(=633-088G	
		L104	6140R-C011A	O	O	COIL,RF	CHOKE COIL TDK 22UH(=633-088G	
		L201	0LR1000K035	O	O	INDUCTOR RADIAL LEAD	100M K 6X6 L5 TP	
		L301	0LR0102J0N5	O	O	INDUCTOR,RADIAL LEAD	10UH 5% TP 3X5 TR5	
		L302	0LR1000K035	O	O	INDUCTOR RADIAL LEAD	100M K 6X6 L5 TP	
		L303	0LR0102J0N5	O	O	INDUCTOR,RADIAL LEAD	10UH 5% TP 3X5 TR5	
		L304	0LR0102J0N5	O	O	INDUCTOR,RADIAL LEAD	10UH 5% TP 3X5 TR5	
		L305	0LR1000K035	O	O	INDUCTOR RADIAL LEAD	100M K 6X6 L5 TP	
		L307	0LR0102J0N5	O	O	INDUCTOR,RADIAL LEAD	10UH 5% TP 3X5 TR5	
		L308	0LR1000K035	O	O	INDUCTOR RADIAL LEAD	100M K 6X6 L5 TP	
		L501	0LA0122K018	O	O	INDUCTOR AXIAL LEAD	12M K 2.3X3.4 L5 TP	
		L503	0LR1000K035	O	O	INDUCTOR RADIAL LEAD	100M K 6X6 L5 TP	
		L504	0LR0102J0N5	O	O	INDUCTOR,RADIAL LEAD	10UH 5% TP 3X5 TR5	
		L506	635-027C	O	O	INDUCTOR,RADIAL LEAD	EL0405RA SKI150G-3 K-TDK 15UH	
		L5G2	0LR1500K035	O	O	INDUCTOR RADIAL LEAD	150M K 6X6 L5 TP	
		L5S1	0LA0332K018	O	O	INDUCTOR AXIAL LEAD	33M K 2.3X3.4 L5 TP	
		L702	0LR1000K035	O	O	INDUCTOR RADIAL LEAD	100M K 6X6 L5 TP	
		L704	874-000T	O	O	WIRE,JUMP	D=0.6 ROLL	
		L705	0LR0102K035	O	O	INDUCTOR RADIAL LEAD	10M K 6X6 L5 TP	
		L706	636-004C	O	O	FILTER(CIRC),EMC	BEAD CORE BFS3550R2FD8,R T/P	
		L751	0LR0102K035		O	INDUCTOR RADIAL LEAD	10M K 6X6 L5 TP	
		L753	0LR0102K035		O	INDUCTOR RADIAL LEAD	10M K 6X6 L5 TP	
		L801	0LR0102J0N5		O	INDUCTOR,RADIAL LEAD	10UH 5% TP 3X5 TR5	
		L802	0LR0102J0N5		O	INDUCTOR,RADIAL LEAD	10UH 5% TP 3X5 TR5	
		L901	0LA1000K018	O	O	INDUCTOR AXIAL LEAD	100M K 2.3X3.4 L5 TP	
		L902	0LA1000K018	O	O	INDUCTOR AXIAL LEAD	100M K 2.3X3.4 L5 TP	
		L903	874-000T	O	O	WIRE,JUMP	D=0.6 ROLL	
		L904	0LA1000K018	O	O	INDUCTOR AXIAL LEAD	100M K 2.3X3.4 L5 TP	
		L905	636-004C	O	O	FILTER(CIRC),EMC	BEAD CORE BFS3550R2FD8,R T/P	
		L906	0LA1000K018	O	O	INDUCTOR AXIAL LEAD	100M K 2.3X3.4 L5 TP	
		L907	636-004C	O	O	FILTER(CIRC),EMC	BEAD CORE BFS3550R2FD8,R T/P	
		L911	0LA1000K018	O	O	INDUCTOR AXIAL LEAD	100M K 2.3X3.4 L5 TP	

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		L912	0LA1000K018	O	O	INDUCTOR AXIAL LEAD	100M K 2.3X3.4 L5 TP	
		L913	874-000T	O	O	WIRE,JUMP	D=0.6 ROLL	
		L914	0LA1000K018	O	O	INDUCTOR AXIAL LEAD	100M K 2.3X3.4 L5 TP	
		L915	0LA1000K018	O	O	INDUCTOR AXIAL LEAD	100M K 2.3X3.4 L5 TP	
		L9F1	0LA1000K018		O	INDUCTOR AXIAL LEAD	100M K 2.3X3.4 L5 TP	
		L9F2	0LA1000K018		O	INDUCTOR AXIAL LEAD	100M K 2.3X3.4 L5 TP	
		LD501	4931R-0086C	O	O	HOLDER ASSEMBLY	VCR DECK/MECHA END(S)	
		LED502	6301R2U001A	O	O	LED ASSY	TOH-30M05G1 OASIS UNIVERSAL 6	
		MS501	6600JR3002C	O	O	SWITCH,MODE	MMS01180ZMBO MIC 5VDC 1MA D37	
		Q151	0TR127309AA	O	O	TRANSISTOR	KTA1273-TP-Y (KTA966A)KEC	
		Q152	0TR127309AA	O	O	TRANSISTOR	KTA1273-TP-Y (KTA966A)KEC	
		Q154	0TR126809BA	O	O	TRANSISTOR,BIPOLARS	KTA1268-BL TP KEC	
		Q155	0TR320509AB	O	O	TRANSISTOR	KTC3205-TP-Y (KTC2236A)KEC	
		Q157	0TR103009AA	O	O	TRANSISTOR	CHIP KRC103S-T1(NC)22-22 KEC	
		Q159	0TR127309AA	O	O	TRANSISTOR	KTA1273-TP-Y (KTA966A)KEC	
		Q161	0TR387509AC	O	O	TRANSISTOR	CHIP KTC3875S-GR-T1(ALG) KEC	
		Q162	0TR387509AC	O	O	TRANSISTOR	CHIP KTC3875S-GR-T1(ALG) KEC	
		Q163	0TR101009AC	O	O	TRANSISTOR	KRC101S-T1(NA)4.7-4.7 CHIP KEC	
		Q164	0TR103009AA	O	O	TRANSISTOR	CHIP KRC103S-T1(NC)22-22 KEC	
		Q165	0TR103009AC	O	O	TRANSISTOR	KRA103S-T1(PC)22-22 CHIP KEC	
		Q166	0TR127309AA	O	O	TRANSISTOR	KTA1273-TP-Y (KTA966A)KEC	
		Q301	0TR387509AC	O	O	TRANSISTOR	CHIP KTC3875S-GR-T1(ALG) KEC	
		Q302	0TR126709AC	O	O	TRANSISTOR	KTA1267-GR MINI TP KEC	
		Q303	0TR387509AC	O	O	TRANSISTOR	CHIP KTC3875S-GR-T1(ALG) KEC	
		Q304	0TR387509AC	O	O	TRANSISTOR	CHIP KTC3875S-GR-T1(ALG) KEC	
		Q305	0TR150409AC	O	O	TRANSISTOR	KTA1504-GR-T1(ASG) CHIP KEC	
		Q306	0TR534409AA	O	O	TRANSISTOR	2SC5344Y TP	
		Q307	0TR150409AC	O	O	TRANSISTOR	KTA1504-GR-T1(ASG) CHIP KEC	
		Q308	0TR150409AC	O	O	TRANSISTOR	KTA1504-GR-T1(ASG) CHIP KEC	
		Q309	0TR150409AC	O	O	TRANSISTOR	KTA1504-GR-T1(ASG) CHIP KEC	
		Q311	0TR320509AB	O	O	TRANSISTOR	KTC3205-TP-Y (KTC2236A)KEC	
		Q502	0TR387509AC	O	O	TRANSISTOR	CHIP KTC3875S-GR-T1(ALG) KEC	
		Q503	0TR127309AA	O	O	TRANSISTOR	KTA1273-TP-Y (KTA966A)KEC	
		Q504	0TR387509AC	O	O	TRANSISTOR	CHIP KTC3875S-GR-T1(ALG) KEC	
		Q5P1	0TR103009AA	O	O	TRANSISTOR	CHIP KRC103S-T1(NC)22-22 KEC	
		Q5P2	0TR103009AA	O	O	TRANSISTOR	CHIP KRC103S-T1(NC)22-22 KEC	
		Q5P3	0TR103009AA	O	O	TRANSISTOR	CHIP KRC103S-T1(NC)22-22 KEC	
		Q5P4	0TR103009AA	O	O	TRANSISTOR	CHIP KRC103S-T1(NC)22-22 KEC	
		Q5P5	0TR103009AA	O	O	TRANSISTOR	CHIP KRC103S-T1(NC)22-22 KEC	
		Q5P6	0TR103009AA	O	O	TRANSISTOR	CHIP KRC103S-T1(NC)22-22 KEC	
		Q5S1	0TR387509AC	O	O	TRANSISTOR	CHIP KTC3875S-GR-T1(ALG) KEC	
		Q7S1	0TR387500AA	O	O	TRANSISTOR	CHIP 2SC3875S(ALY) KEC	
		Q7S2	0TR103009AA	O	O	TRANSISTOR	CHIP KRC103S-T1(NC)22-22 KEC	
		Q901	0TR103009AA	O	O	TRANSISTOR	CHIP KRC103S-T1(NC)22-22 KEC	
		Q902	0TR103009AC	O	O	TRANSISTOR	KRA103S-T1(PC)22-22 CHIP KEC	
		Q903	0TR103009AA	O	O	TRANSISTOR	CHIP KRC103S-T1(NC)22-22 KEC	
		Q9M1	0TR387509AC	O	O	TRANSISTOR	CHIP KTC3875S-GR-T1(ALG) KEC	
		Q9M2	0TR387509AC	O	O	TRANSISTOR	CHIP KTC3875S-GR-T1(ALG) KEC	
		R101	614-007A	O	O	RESISTOR	2.7/2W CEMENT SMPS V	
		R102	0RD1803F608	O	O	RESISTOR,FIXED CARBON FILM	180K OHM 1/6 W 0.05 TA26	
		R103	0RD0682F608	O	O	RESISTOR,FIXED CARBON FILM	68 OHM 1/6 W 5.00% TA26	
		R104	0RS5602K619	O	O	RESISTOR,FIXED METAL OXIDE FIL	56K OHM 2 W 5.00% TR	
		R105	0RF0101A619	O	O	RESISTOR,DRAWING	1 OHM 1/2 W(7.0) 5.00% TR	
		R106	0RD1803F608	O	O	RESISTOR,FIXED CARBON FILM	180K OHM 1/6 W 0.05 TA26	

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		R109	0RS0350K619	O	O	RESISTOR,FIXED METAL OXIDE FIL	0.35 OHM 2 W 5.00% TR	
		R112	0RH1003C622	O	O	RESISTOR,METAL GLAZED(CHIP)	100K OHM 1 / 16 W 1608 5.00% D	
		R116	0RH2200C622	O	O	RESISTOR,METAL GLAZED(CHIP)	220 OHM 1 / 16 W 1608 5.00% D	
		R117	0RH2201C622	O	O	RESISTOR,METAL GLAZED(CHIP)	2.2K OHM 1 / 16 W 1608 5.00% D	
		R118	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R119	0RN3301F408	O	O	RESISTOR,FIXED METAL FILM	3.3K OHM 1/6 W 1% TA26	
		R120	0RN3001F408	O	O	RESISTOR,FIXED METAL FILM	3K OHM 1/6 W 1% TA26	
		R122	0RH1003C622	O	O	RESISTOR,METAL GLAZED(CHIP)	100K OHM 1 / 16 W 1608 5.00% D	
		R125	0RD4701F608	O	O	RESISTOR,FIXED CARBON FILM	4.7K OHM 1/6 W 5% TA26	
		R126	0RD6800F608	O	O	RESISTOR,FIXED CARBON FILM	680 OHM 1/6 W 5% TA26	
		R151	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R152	0RH3300C622	O	O	RESISTOR,METAL GLAZED(CHIP)	330 OHM 1 / 16 W 1608 5.00% D	
		R153	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R154	0RH3300C622	O	O	RESISTOR,METAL GLAZED(CHIP)	330 OHM 1 / 16 W 1608 5.00% D	
		R155	0RH3301C622	O	O	RESISTOR,METAL GLAZED(CHIP)	3.3K OHM 1 / 16 W 1608 5.00% D	
		R157	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R158	0RH1802C622	O	O	RESISTOR,METAL GLAZED(CHIP)	18K OHM 1 / 16 W 1608 5.00% D	
		R159	0RH4700C422	O	O	RESISTOR,METAL GLAZED(CHIP)	470 OHM 1 / 16 W 1608 1.00% D	
		R161	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R163	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R166	0RH2201C622	O	O	RESISTOR,METAL GLAZED(CHIP)	2.2K OHM 1 / 16 W 1608 5.00% D	
		R167	0RH3901C622	O	O	RESISTOR,METAL GLAZED(CHIP)	3.9K OHM 1 / 16 W 1608 5.00% D	
		R170	0RH5601C622	O	O	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D	
		R172	0RH2700C622	O	O	RESISTOR,METAL GLAZED(CHIP)	270 OHM 1 / 16 W 1608 5.00% D	
		R173	0RH2700C622	O	O	RESISTOR,METAL GLAZED(CHIP)	270 OHM 1 / 16 W 1608 5.00% D	
		R1B1	0RD1504H632	O	O	RESISTOR,FIXED CARBON FILM	1.5M OHM 1/2 W 5.00% MF10	
		R1W1	0RH0000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D	
		R201	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R204	0RH4702C622	O	O	RESISTOR,METAL GLAZED(CHIP)	47K OHM 1 / 16 W 1608 5.00% D	
		R301	0RH5602C622	O	O	RESISTOR,METAL GLAZED(CHIP)	56K OHM 1 / 16 W 1608 5.00% D	
		R303	0RH1802C622	O	O	RESISTOR,METAL GLAZED(CHIP)	18K OHM 1 / 16 W 1608 5.00% D	
		R304	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R305	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R306	0RH5601C622	O	O	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D	
		R307	0RH2201C622	O	O	RESISTOR,METAL GLAZED(CHIP)	2.2K OHM 1 / 16 W 1608 5.00% D	
		R308	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R309	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R310	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R311	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R312	0RH6802C622	O	O	RESISTOR,METAL GLAZED(CHIP)	68K OHM 1 / 16 W 1608 5.00% D	
		R313	0RH1800C622	O	O	RESISTOR,METAL GLAZED(CHIP)	180 OHM 1 / 16 W 1608 5.00% D	
		R314	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R315	0RH1000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D	
		R316	0RH1000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D	
		R317	0RH5601C622	O	O	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D	
		R318	0RH3901C622	O	O	RESISTOR,METAL GLAZED(CHIP)	3.9K OHM 1 / 16 W 1608 5.00% D	
		R319	0RH5600C622	O	O	RESISTOR,METAL GLAZED(CHIP)	560 OHM 1 / 16 W 1608 5.00% D	
		R320	0RH1500C622	O	O	RESISTOR,METAL GLAZED(CHIP)	150 OHM 1 / 16 W 1608 5.00% D	
		R321	0RH1201C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1.2K OHM 1 / 16 W 1608 5.00% D	
		R322	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R324	0RH3303C622	O	O	RESISTOR,METAL GLAZED(CHIP)	330K OHM 1 / 16 W 1608 5.00% D	
		R325	0RH4700C622	O	O	RESISTOR,METAL GLAZED(CHIP)	470 OHM 1 / 16 W 1608 5.00% D	
		R326	0RH1202C622	O	O	RESISTOR,METAL GLAZED(CHIP)	12K OHM 1 / 16 W 1608 5.00% D	
		R327	0RH5601C622	O	O	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D	

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		R328	0RH2700C622	O	O	RESISTOR,METAL GLAZED(CHIP)	270 OHM 1 / 16 W 1608 5.00% D	
		R329	0RH1202C622	O	O	RESISTOR,METAL GLAZED(CHIP)	12K OHM 1 / 16 W 1608 5.00% D	
		R330	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R331	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R334	0RH2701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	2.7K OHM 1 / 16 W 1608 5.00% D	
		R335	0RH6801C622	O	O	RESISTOR,METAL GLAZED(CHIP)	6.8K OHM 1 / 16 W 1608 5.00% D	
		R336	0RH1003C622	O	O	RESISTOR,METAL GLAZED(CHIP)	100K OHM 1 / 16 W 1608 5.00% D	
		R337	0RH1801C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1.8K OHM 1 / 16 W 1608 5.00% D	
		R338	0RH2700C622	O	O	RESISTOR,METAL GLAZED(CHIP)	270 OHM 1 / 16 W 1608 5.00% D	
		R339	0RH5600C622	O	O	RESISTOR,METAL GLAZED(CHIP)	560 OHM 1 / 16 W 1608 5.00% D	
		R340	0RH1802C622	O	O	RESISTOR,METAL GLAZED(CHIP)	18K OHM 1 / 16 W 1608 5.00% D	
		R342	0RH5600C622	O	O	RESISTOR,METAL GLAZED(CHIP)	560 OHM 1 / 16 W 1608 5.00% D	
		R343	0RH0752C622	O	O	RESISTOR,METAL GLAZED(CHIP)	75 OHM 1 / 16 W 1608 5.00% D	
		R344	0RH4700C622	O	O	RESISTOR,METAL GLAZED(CHIP)	470 OHM 1 / 16 W 1608 5.00% D	
		R345	0RH4700C622	O	O	RESISTOR,METAL GLAZED(CHIP)	470 OHM 1 / 16 W 1608 5.00% D	
		R346	0RH1000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D	
		R347	0RH1000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D	
		R349	0RH1801C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1.8K OHM 1 / 16 W 1608 5.00% D	
		R350	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R351	0RH8203C622	O	O	RESISTOR,METAL GLAZED(CHIP)	820K OHM 1 / 16 W 1608 5.00% D	
		R352	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R3A1	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R3W1	0RH0000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D	
		R3W3	0RH0000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D	
		R501	0RH1000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D	
		R502	0RH1000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D	
		R503	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R505	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R506	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R507	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R508	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R509	0RH2201C622	O	O	RESISTOR,METAL GLAZED(CHIP)	2.2K OHM 1 / 16 W 1608 5.00% D	
		R510	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R511	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R512	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R513	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R514	0RH1203C622	O	O	RESISTOR,METAL GLAZED(CHIP)	120K OHM 1 / 16 W 1608 5.00% D	
		R515	0RH2700C622	O	O	RESISTOR,METAL GLAZED(CHIP)	270 OHM 1 / 16 W 1608 5.00% D	
		R516	0RH4703C622	O	O	RESISTOR,METAL GLAZED(CHIP)	470K OHM 1 / 16 W 1608 5.00% D	
		R517	0RH4700C622	O	O	RESISTOR,METAL GLAZED(CHIP)	470 OHM 1 / 16 W 1608 5.00% D	
		R518	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R520	0RH3901C622	O	O	RESISTOR,METAL GLAZED(CHIP)	3.9K OHM 1 / 16 W 1608 5.00% D	
		R521	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R522	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R523	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R524	0RH0222C622	O	O	RESISTOR,METAL GLAZED(CHIP)	22 OHM 1 / 16 W 1608 5.00% D	
		R525	0RH5601C622	O	O	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D	
		R526	0RH5601C622	O	O	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D	
		R527	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R528	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R530	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R531	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R535	0RH4703C622	O	O	RESISTOR,METAL GLAZED(CHIP)	470K OHM 1 / 16 W 1608 5.00% D	
		R544	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		R546	0RH5601C622	O	O	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D	
		R547	0RH1202C622	O	O	RESISTOR,METAL GLAZED(CHIP)	12K OHM 1 / 16 W 1608 5.00% D	
		R548	0RH1003C622	O	O	RESISTOR,METAL GLAZED(CHIP)	100K OHM 1 / 16 W 1608 5.00% D	
		R550	0RH2200C622	O	O	RESISTOR,METAL GLAZED(CHIP)	220 OHM 1 / 16 W 1608 5.00% D	
		R553	0RH2200C622	O	O	RESISTOR,METAL GLAZED(CHIP)	220 OHM 1 / 16 W 1608 5.00% D	
		R555	0RH2200C622	O	O	RESISTOR,METAL GLAZED(CHIP)	220 OHM 1 / 16 W 1608 5.00% D	
		R556	0RH2202C622	O	O	RESISTOR,METAL GLAZED(CHIP)	22K OHM 1 / 16 W 1608 5.00% D	
		R557	0RH2702C622	O	O	RESISTOR,METAL GLAZED(CHIP)	27K OHM 1 / 16 W 1608 5.00% D	
		R558	0RH2202C622	O	O	RESISTOR,METAL GLAZED(CHIP)	22K OHM 1 / 16 W 1608 5.00% D	
		R561	0RH5600C622	O	O	RESISTOR,METAL GLAZED(CHIP)	560 OHM 1 / 16 W 1608 5.00% D	
		R562	0RH5600C622	O	O	RESISTOR,METAL GLAZED(CHIP)	560 OHM 1 / 16 W 1608 5.00% D	
		R563	0RH5601C622	O	O	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D	
		R564	0RH2702C622	O	O	RESISTOR,METAL GLAZED(CHIP)	27K OHM 1 / 16 W 1608 5.00% D	
		R566	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R567	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R568	0RH6802C622	O	O	RESISTOR,METAL GLAZED(CHIP)	68K OHM 1 / 16 W 1608 5.00% D	
		R569	0RH1004C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1M OHM 1 / 16 W 1608 5.00% D	
		R575	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R576	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R577	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R578	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R579	0RH5602C622	O	O	RESISTOR,METAL GLAZED(CHIP)	56K OHM 1 / 16 W 1608 5.00% D	
		R582	0RH1000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D	
		R589	0RH1004C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1M OHM 1 / 16 W 1608 5.00% D	
		R591	0RH1003C622	O	O	RESISTOR,METAL GLAZED(CHIP)	100K OHM 1 / 16 W 1608 5.00% D	
		R5A2	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R5A3	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R5A5	0RH4703C622	O	O	RESISTOR,METAL GLAZED(CHIP)	470K OHM 1 / 16 W 1608 5.00% D	
		R5B3	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R5B4	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R5C1	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R5C5	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R5C6	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R5C7	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R5C9	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R5P2	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R5P3	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R5R1	0RH3300C622	O	O	RESISTOR,METAL GLAZED(CHIP)	330 OHM 1 / 16 W 1608 5.00% D	
		R5R2	0RH3300C622	O	O	RESISTOR,METAL GLAZED(CHIP)	330 OHM 1 / 16 W 1608 5.00% D	
		R5R3	0RH3300C622	O	O	RESISTOR,METAL GLAZED(CHIP)	330 OHM 1 / 16 W 1608 5.00% D	
		R5R4	0RH3300C622	O	O	RESISTOR,METAL GLAZED(CHIP)	330 OHM 1 / 16 W 1608 5.00% D	
		R5R5	0RH3300C622	O	O	RESISTOR,METAL GLAZED(CHIP)	330 OHM 1 / 16 W 1608 5.00% D	
		R5R6	0RH3300C622	O	O	RESISTOR,METAL GLAZED(CHIP)	330 OHM 1 / 16 W 1608 5.00% D	
		R5R7	0RH3300C622	O	O	RESISTOR,METAL GLAZED(CHIP)	330 OHM 1 / 16 W 1608 5.00% D	
		R5R8	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R5S1	0RH5601C622	O	O	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D	
		R5T1	0RH1801C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1.8K OHM 1 / 16 W 1608 5.00% D	
		R5T10	0RH1501C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1.5K OHM 1 / 16 W 1608 5.00% D	
		R5T11	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R5T2	0RH1501C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1.5K OHM 1 / 16 W 1608 5.00% D	
		R5T3	0RH2201C622	O	O	RESISTOR,METAL GLAZED(CHIP)	2.2K OHM 1 / 16 W 1608 5.00% D	
		R5T4	0RH2701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	2.7K OHM 1 / 16 W 1608 5.00% D	
		R5T5	0RH3301C622	O	O	RESISTOR,METAL GLAZED(CHIP)	3.3K OHM 1 / 16 W 1608 5.00% D	
		R5T9	0RH1801C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1.8K OHM 1 / 16 W 1608 5.00% D	

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		R5W1	0RH0000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D	
		R5W2	0RH0000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D	
		R701	0RH0000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D	
		R702	0RH0000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D	
		R706	0RH2200C622	O	O	RESISTOR,METAL GLAZED(CHIP)	220 OHM 1 / 16 W 1608 5.00% D	
		R707	0RH2200C622	O	O	RESISTOR,METAL GLAZED(CHIP)	220 OHM 1 / 16 W 1608 5.00% D	
		R709	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R753	0RH1001C622		O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R754	0RH3301C622		O	RESISTOR,METAL GLAZED(CHIP)	3.3K OHM 1 / 16 W 1608 5.00% D	
		R755	0RH3301C622		O	RESISTOR,METAL GLAZED(CHIP)	3.3K OHM 1 / 16 W 1608 5.00% D	
		R758	0RH4701C622		O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R759	0RH5601C622		O	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D	
		R7S1	0RH0000C622	O	O	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D	
		R801	0RH4701C622		O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R802	0RH4701C622		O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R817	0RH3304C622		O	RESISTOR,METAL GLAZED(CHIP)	3.3M OHM 1 / 16 W 1608 5.00% D	
		R818	0RH3302C622		O	RESISTOR,METAL GLAZED(CHIP)	33K OHM 1 / 16 W 1608 5.00% D	
		R819	0RH2701C622		O	RESISTOR,METAL GLAZED(CHIP)	2.7K OHM 1 / 16 W 1608 5.00% D	
		R820	0RH3902C622		O	RESISTOR,METAL GLAZED(CHIP)	39K OHM 1 / 16 W 1608 5.00% D	
		R821	0RH2701C622		O	RESISTOR,METAL GLAZED(CHIP)	2.7K OHM 1 / 16 W 1608 5.00% D	
		R822	0RH3302C622		O	RESISTOR,METAL GLAZED(CHIP)	33K OHM 1 / 16 W 1608 5.00% D	
		R823	0RH4700C622		O	RESISTOR,METAL GLAZED(CHIP)	470 OHM 1 / 16 W 1608 5.00% D	
		R824	0RH1000C622		O	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D	
		R825	0RH5600C622		O	RESISTOR,METAL GLAZED(CHIP)	560 OHM 1 / 16 W 1608 5.00% D	
		R826	0RH1801C622		O	RESISTOR,METAL GLAZED(CHIP)	1.8K OHM 1 / 16 W 1608 5.00% D	
		R827	0RH1001C622		O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R828	0RH1001C622		O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R830	0RH4701C622		O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R831	0RH4701C622		O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R8W1	0RH0000C622		O	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D	
		R901	0RH0752C622	O	O	RESISTOR,METAL GLAZED(CHIP)	75 OHM 1 / 16 W 1608 5.00% D	
		R902	0RH0752C622	O	O	RESISTOR,METAL GLAZED(CHIP)	75 OHM 1 / 16 W 1608 5.00% D	
		R903	0RH3901C622	O	O	RESISTOR,METAL GLAZED(CHIP)	3.9K OHM 1 / 16 W 1608 5.00% D	
		R904	0RH4702C622	O	O	RESISTOR,METAL GLAZED(CHIP)	47K OHM 1 / 16 W 1608 5.00% D	
		R905	0RH5600C622	O	O	RESISTOR,METAL GLAZED(CHIP)	560 OHM 1 / 16 W 1608 5.00% D	
		R906	0RH5600C622	O	O	RESISTOR,METAL GLAZED(CHIP)	560 OHM 1 / 16 W 1608 5.00% D	
		R911	0RH0752C622	O	O	RESISTOR,METAL GLAZED(CHIP)	75 OHM 1 / 16 W 1608 5.00% D	
		R912	0RH0752C622	O	O	RESISTOR,METAL GLAZED(CHIP)	75 OHM 1 / 16 W 1608 5.00% D	
		R913	0RH5600C622	O	O	RESISTOR,METAL GLAZED(CHIP)	560 OHM 1 / 16 W 1608 5.00% D	
		R914	0RH5600C622	O	O	RESISTOR,METAL GLAZED(CHIP)	560 OHM 1 / 16 W 1608 5.00% D	
		R964	0RH8200C622	O	O	RESISTOR,METAL GLAZED(CHIP)	820 OHM 1 / 16 W 1608 5.00% D	
		R965	0RH1001C622	O	O	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D	
		R9C1	0RH1202C622	O	O	RESISTOR,METAL GLAZED(CHIP)	12K OHM 1 / 16 W 1608 5.00% D	
		R9C2	0RH1002C622	O	O	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D	
		R9C3	0RH1501C622	O		RESISTOR,METAL GLAZED(CHIP)	1.5K OHM 1 / 16 W 1608 5.00% D	
		R9C4	0RH1501C622	O		RESISTOR,METAL GLAZED(CHIP)	1.5K OHM 1 / 16 W 1608 5.00% D	
		R9F1	0RH4701C622		O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R9F2	0RH4701C622		O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		R9F3	0RH0752C622		O	RESISTOR,METAL GLAZED(CHIP)	75 OHM 1 / 16 W 1608 5.00% D	
		R9M1	0RH4702C622	O		RESISTOR,METAL GLAZED(CHIP)	47K OHM 1 / 16 W 1608 5.00% D	
		R9M2	0RH3901C622	O		RESISTOR,METAL GLAZED(CHIP)	3.9K OHM 1 / 16 W 1608 5.00% D	
		R9M3	0RH4702C622	O		RESISTOR,METAL GLAZED(CHIP)	47K OHM 1 / 16 W 1608 5.00% D	
		R9M4	0RH3901C622	O		RESISTOR,METAL GLAZED(CHIP)	3.9K OHM 1 / 16 W 1608 5.00% D	
		R9M5	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	

S	AL	LOCA.NO	PART NO(LG)	A	B	DESCRIPTION	SPECIFICATION	REMARKS
		R9M6	0RH4701C622	O	O	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D	
		RC501	6712R1938EA	O	O	REMOTE CONTROLLER RECEIVER	TSOP2238AY VISHAY 38KHZ LGEDI	
		RS501	6500RAB009A	O	O	SENSOR	KIT-3001B KODENSHI KOREA 4PIN	
		RS502	6500RAB009A	O	O	SENSOR	KIT-3001B KODENSHI KOREA 4PIN	
		SW5T11	556-213C	O	O	SWITCH,DETECTOR	THVV951BAA POSTECH DC 12 V 5-0	
		SW5T12	556-213C	O		SWITCH,DETECTOR	THVV951BAA POSTECH DC 12 V 5-0	
		SW5T13	556-213C	O		SWITCH,DETECTOR	THVV951BAA POSTECH DC 12 V 5-0	
		SW5T15	556-213C	O	O	SWITCH,DETECTOR	THVV951BAA POSTECH DC 12 V 5-0	
		SW5T3	556-213C	O	O	SWITCH,DETECTOR	THVV951BAA POSTECH DC 12 V 5-0	
		SW5T4	556-213C	O	O	SWITCH,DETECTOR	THVV951BAA POSTECH DC 12 V 5-0	
		SW5T5	556-213C	O	O	SWITCH,DETECTOR	THVV951BAA POSTECH DC 12 V 5-0	
		SW5T6	556-213C	O	O	SWITCH,DETECTOR	THVV951BAA POSTECH DC 12 V 5-0	
		SW5T7	556-213C	O	O	SWITCH,DETECTOR	THVV951BAA POSTECH DC 12 V 5-0	
		SW981	556-219B		O	SWITCH,TACT	THVV502GAA POSTECH DC 12 V 5-	
		SW982	556-219B		O	SWITCH,TACT	THVV502GAA POSTECH DC 12 V 5-	
⚠		T101	642-015G	O	O	TRANSFORMER,SMPS[COIL]	SJE-015G/SHT-015G SJ/SH/CS/LSE	
		TU701	6700PFPL07A	O	O	TUNER	TADM-S101D(SECAM,LGIT) LG INOT	
⚠		V101	656-004C	O	O	VARISTOR,DRAWING	SVC681D-10A SAMHWA 4.O CUT	
		W361	0RD6800F608	O	O	RESISTOR,FIXED CARBON FILM	680 OHM 1/6 W 5% TA26	
		X301	6202R2443AC	O	O	RESONATOR,CRYSTAL	HC49U BUBANG 4-433709MHZ 15	
		X501	6212AA2100C	O	O	RESONATOR,CRYSTAL	HC-49S BUBANG 10MHZ +/- 30 PPM	
		X502	6202R-DA01A	O	O	RESONATOR,CRYSTAL	CFS-308 CITIZEN 32-768KHZ 20	
		X751	529-021Q		O	RESONATOR,CRYSTAL	49U BUBANG 18432000HZ 30PPM 16	
		ZD151	0DZ132609DA	O	O	DIODE,ZENER	UZ-13BSC 26MM TP PYUNG CHANG D	
		ZD199	0DZ332609BA	O	O	DIODE,ZENER	UZ-33BSB 26MM TP PYUNG CHANG D	
		ZD503	0DZ620009AM	O	O	DIODE,ZENERS	UZ-6.2BSC 26MM PYUNG CHANG TP	
		ZD803	0DZ132609DA		O	DIODE,ZENER	UZ-13BSC 26MM TP PYUNG CHANG D	
		ZD804	0DZ132609DA		O	DIODE,ZENER	UZ-13BSC 26MM TP PYUNG CHANG D	
		ZD901	0DZ132609DA		O	DIODE,ZENER	UZ-13BSC 26MM TP PYUNG CHANG D	
		ZD902	0DZ132609DA		O	DIODE,ZENER	UZ-13BSC 26MM TP PYUNG CHANG D	
		ZD903	0DZ752609AA		O	DIODE,ZENER	GDZJ7.5B 26MM TP GRANDE DO34	
		ZD904	0DZ752609AA		O	DIODE,ZENER	GDZJ7.5B 26MM TP GRANDE DO34	

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